



| Product Name | Tablet PC  |
|--------------|------------|
| Model No     | MS-N0J1    |
| FCC ID.      | I4L-MSN0J1 |

| Applicant | MICRO-STAR INT'L Co., LTD.                                   |
|-----------|--------------------------------------------------------------|
| Address   | No. 69, Li-De St., Jung-He District, New Taipei City, Taiwan |

| Date of Receipt | Dec. 30, 2011      |
|-----------------|--------------------|
| Issue Date      | Mar. 23, 2012      |
| Report No.      | 121116R-RFUSP42V01 |
| Report Version  | V1.0               |





The test results relate only to the samples tested.

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# Test Report Certification

Issue Date: Mar. 23, 2012

Report No.: 121116R-RFUSP42V01



### Accredited by NIST (NVLAP) NVLAP Lab Code: 200533-0

| Product Name        | Tablet PC                                                    |  |
|---------------------|--------------------------------------------------------------|--|
| Applicant           | MICRO-STAR INT'L Co., LTD.                                   |  |
| Address             | No. 69, Li-De St., Jung-He District, New Taipei City, Taiwan |  |
| Manufacturer        | MICRO-STAR INT'L Co., LTD.                                   |  |
| Model No.           | MS-N0J1                                                      |  |
| FCC ID.             | I4L-MSN0J1                                                   |  |
| EUT Rated Voltage   | AC 100-240V, 50-60Hz                                         |  |
| EUT Test Voltage    | AC 120V/60Hz                                                 |  |
| Trade Name          | msi                                                          |  |
| Applicable Standard | FCC CFR Title 47 Part 15 Subpart C: 2010                     |  |
|                     | ANSI C63.4: 2003                                             |  |
| Test Result         | Complied                                                     |  |

The test results relate only to the samples tested.

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Documented By: Jinn Chen

(Senior Adm. Specialist / Jinn Chen)

Tested By :

(Assistant Engineer / Henk Huang)

Approved By

(Manager / Vincent Lin)



# TABLE OF CONTENTS

| De   | Description                              |    |  |  |
|------|------------------------------------------|----|--|--|
| 1.   | GENERAL INFORMATION                      |    |  |  |
| 1.1. | EUT Description                          |    |  |  |
| 1.2. | Operational Description                  |    |  |  |
| 1.3. | Tested System Details                    |    |  |  |
| 1.4. | Configuration of Tested System           |    |  |  |
| 1.5. | EUT Exercise Software                    |    |  |  |
| 1.6. | Test Facility                            |    |  |  |
| 2.   | Conducted Emission                       | 11 |  |  |
| 2.1. | Test Equipment                           | 11 |  |  |
| 2.2. | Test Setup                               | 11 |  |  |
| 2.3. | Limits                                   | 12 |  |  |
| 2.4. | Test Procedure                           | 12 |  |  |
| 2.5. | Uncertainty                              | 12 |  |  |
| 2.6. | Test Result of Conducted Emission        | 13 |  |  |
| 3.   | Peak Power Output                        | 15 |  |  |
| 3.1. | Test Equipment                           | 15 |  |  |
| 3.2. | Test Setup                               | 15 |  |  |
| 3.3. | Limits                                   | 15 |  |  |
| 3.4. | Test Procedure                           | 16 |  |  |
| 3.5. | Uncertainty                              | 16 |  |  |
| 3.6. | Test Result of Peak Power Output         | 17 |  |  |
| 4.   | Radiated Emission                        | 23 |  |  |
| 4.1. | Test Equipment                           | 23 |  |  |
| 4.2. | Test Setup                               | 24 |  |  |
| 4.3. | Limits                                   |    |  |  |
| 4.4. | Test Procedure                           | 26 |  |  |
| 4.5. | Uncertainty                              | 26 |  |  |
| 4.6. | Test Result of Radiated Emission         | 27 |  |  |
| 5.   | RF antenna conducted test                | 60 |  |  |
| 5.1. | Test Equipment                           | 66 |  |  |
| 5.2. | Test Setup                               | 66 |  |  |
| 5.3. | Limits                                   |    |  |  |
| 5.4. | Test Procedure                           |    |  |  |
| 5.5. | Uncertainty                              |    |  |  |
| 5.6. | Test Result of RF antenna conducted test | 68 |  |  |
| 6.   | Band Edge                                | 80 |  |  |
| 6.1. | Test Equipment                           |    |  |  |
| 6.2. | Test Setup                               |    |  |  |
| 6.3. | Limits                                   |    |  |  |
| 6.4. | Test Procedure                           |    |  |  |
| 6.5. | Uncertainty                              |    |  |  |
| 6.6. | Test Result of Band Edge                 | 89 |  |  |



| 7.   | Occupied Bandwidth                             | 101 |
|------|------------------------------------------------|-----|
| 7.1. | Test Equipment                                 | 101 |
| 7.2. | Test Setup                                     | 101 |
| 7.3. | Limits                                         |     |
| 7.4. | Test Procedure                                 | 101 |
| 7.5. | Uncertainty                                    | 101 |
| 7.6. | Test Result of Occupied Bandwidth              |     |
| 8.   | Power Density                                  | 111 |
| 8.1. | Test Equipment                                 | 111 |
| 8.2. | Test Setup                                     |     |
| 8.3. | Limits                                         |     |
| 8.4. | Test Procedure                                 | 111 |
| 8.5. | Uncertainty                                    | 111 |
| 8.6. | Test Result of Power Density                   | 112 |
| 9.   | Duty Cycle                                     | 121 |
| 9.1. | Test Equipment                                 | 121 |
| 9.2. | Test Setup                                     |     |
| 9.3. | Uncertainty                                    |     |
| 9.4. | Test Result                                    |     |
| 10.  | EMI Reduction Method During Compliance Testing | 126 |

Attachment 1: EUT Test Photographs Attachment 2: EUT Detailed Photographs

Page: 4 of 128



# 1. GENERAL INFORMATION

# 1.1. EUT Description

| Product Name                  | Tablet PC                                                     |  |
|-------------------------------|---------------------------------------------------------------|--|
| Trade Name                    | msi                                                           |  |
| Model No.                     | MS-N0J1                                                       |  |
| FCC ID.                       | I4L-MSN0J1                                                    |  |
| Frequency Range               | 2412-2462MHz for 802.11b/g/n-20BW                             |  |
| Number of Channels            | 802.11b/g/n-20MHz: 11 CH                                      |  |
| Data Speed                    | 802.11b: 1-11Mbps, 802.11g: 6-54Mbps, 802.11n: up to 72.2Mbps |  |
| Type of Modulation            | 802.11b:DSSS (DBPSK, DQPSK, CCK)                              |  |
|                               | 802.11g/n:OFDM (BPSK, QPSK, 16QAM, 64QAM)                     |  |
| Antenna Type                  | PIFA                                                          |  |
| Antenna Gain                  | Refer to the table "Antenna List"                             |  |
| Channel Control               | ontrol Auto                                                   |  |
| Power Adapter                 | MFR: DELTA, M/N: ADP-18TB A                                   |  |
| Input: 100-240V, 50-60Hz 0.6A |                                                               |  |
|                               | Output: 12V==1.5A                                             |  |
|                               | Cable Out: Non-shielded, 1.5m, with one ferrite bonded.       |  |

# Antenna List

| No. | Manufacturer | Part No.                  | Antenna Type | Peak Gain            |
|-----|--------------|---------------------------|--------------|----------------------|
| 1   | msi          | N0J1-WIFI-Internal (main) | PIFA         | 3.36 dBi for 2.4 GHz |
|     |              | N0J1-WIFI-External (aux)  |              |                      |

### Note:

1. The antenna of EUT is conform to FCC 15.203.



### 802.11b/g/n-20MHz Center Frequency of Each Channel:

| Channel     | Frequency | Channel     | Frequency | Channel     | Frequency | Channel     | Frequency |
|-------------|-----------|-------------|-----------|-------------|-----------|-------------|-----------|
| Channel 01: | 2412 MHz  | Channel 02: | 2417 MHz  | Channel 03: | 2422 MHz  | Channel 04: | 2427 MHz  |
| Channel 05: | 2432 MHz  | Channel 06: | 2437 MHz  | Channel 07: | 2442 MHz  | Channel 08: | 2447 MHz  |
| Channel 09: | 2452 MHz  | Channel 10: | 2457 MHz  | Channel 11: | 2462 MHz  |             |           |

- 1. The EUT is Tablet PC with a built-in 2.4GHz WLAN and Bluetooth transceiver, this report for WLAN.
- 2. Regarding to the operation frequency, the lowest, middle and highest frequency are selected to perform the test.
- 3. Lowest and highest data rates are tested in each mode. Only worst case is shown in the report. (802.11b is 1Mbps > 802.11g is 6Mbps > 802.11n(20M-BW) is 7.2Mbps)
- 4. These tests are conducted on a sample for the purpose of demonstrating compliance of 802.11b/g/n transmitter with Part 15 Subpart C Paragraph 15.247 of spread spectrum devices.
- 5. The radiation measurements are performed in X, Y, Z axis positioning. Only the worst case is shown in the report.

| Test Mode: | Mode 1: Transmit (802.11b 1Mbps)                                |  |
|------------|-----------------------------------------------------------------|--|
|            | Mode 2: Transmit (802.11g 6Mbps)                                |  |
|            | Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW)                  |  |
|            | Mode 4: Transmit (802.11b 1Mbps)-Inter modulation               |  |
|            | Mode 5: Transmit (802.11g 6Mbps)-Inter modulation               |  |
|            | Mode 6: Transmit (802.11n MCS0 7.2Mbps 20M-BW)-Inter modulation |  |



# 1.3. Tested System Details

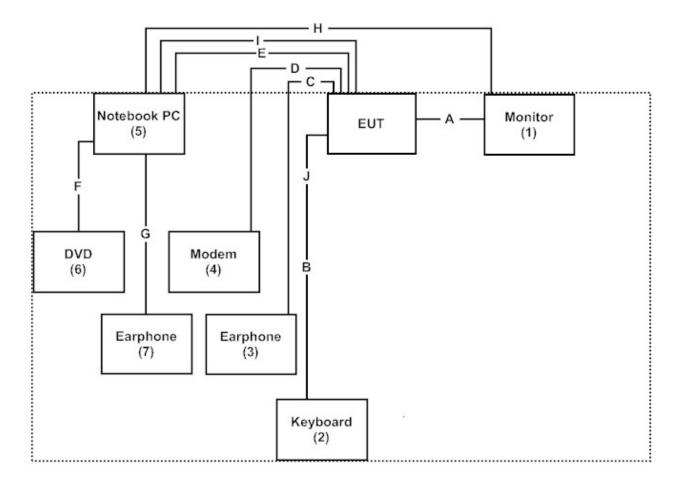
The types for all equipment, plus descriptions of all cables used in the tested system (including inserted cards) are:

|   | Product     | Manufacturer | Model No. | Serial No.   | Power Cord         |
|---|-------------|--------------|-----------|--------------|--------------------|
| 1 | Monitor     | LG           | W2261VT   | 907YHZK07303 | Non-Shielded, 1.8m |
| 2 | Keyboard    | Logitech     | Y-U0009   | LZ027HU      | N/A                |
| 3 | Earphone    | AIWA         | N/A       | N/A          | N/A                |
| 4 | Modem       | ACEEX        | DM-1414   | 0102027558   | Non-Shielded, 1.8m |
| 5 | Notebook PC | DELL         | PPT       | N/A          | Non-Shielded, 1.8m |
| 6 | DVD         | DELL         | PD01S     | N/A          | N/A                |
| 7 | Earphone    | AIWA         | N/A       | N/A          | N/A                |

| Signal Cable Type |                       | Signal cable Description |
|-------------------|-----------------------|--------------------------|
| A                 | HDMI Cable            | Non-Shielded, 2m         |
| В                 | USB Cable             | Non-Shielded, 1m         |
| С                 | Earphone Cable        | Non-Shielded, 1m         |
| D                 | Modem Cable           | Non-Shielded, 1m         |
| Е                 | USB Cable             | Non-Shielded, 1m         |
| F                 | USB Cable             | Non-Shielded, 1m         |
| G                 | Earphone Cable        | Non-Shielded, 1m         |
| Н                 | D-SUB Cable           | Non-Shielded, 1.5m       |
| I                 | USB Cable             | Non-Shielded, 1m         |
| J                 | Mini USB to USB Cable | Non-Shielded, 1m         |



# 1.4. Configuration of Tested System



### 1.5. EUT Exercise Software

- (1) Setup the EUT as shown in Section 1.4
- (2) Execute software on the EUT.
- (3) Configure the test mode, the test channel, and the data rate.
- (4) Press "OK" to start the continuous Transmit.
- (5) Verify that the EUT works properly.



# 1.6. Test Facility

Ambient conditions in the laboratory:

| Items                      | Required (IEC 68-1) | Actual   |
|----------------------------|---------------------|----------|
| Temperature (°C)           | 15-35               | 20-35    |
| Humidity (%RH)             | 25-75               | 50-65    |
| Barometric pressure (mbar) | 860-1060            | 950-1000 |

The related certificate for our laboratories about the test site and management system can be downloaded from

QuieTek Corporation's Web Site: http://www.quietek.com/tw/ctg/cts/accreditations.htm

The address and introduction of QuieTek Corporation's laboratories can be founded in our Web site: <a href="http://www.quietek.com/">http://www.quietek.com/</a>

Site Description: File on

Federal Communications Commission

FCC Engineering Laboratory 7435 Oakland Mills Road Columbia, MD 21046

Registration Number: 92195

Accreditation on NVLAP NVLAP Lab Code: 200533-0

Site Name: Quietek Corporation Site Address: No.5-22, Ruishukeng,

Linkou Dist. New Taipei City 24451,

Taiwan, R.O.C.

TEL: 886-2-8601-3788 / FAX: 886-2-8601-3789

E-Mail: service@quietek.com

FCC Accreditation Number: TW1014



### 2. Conducted Emission

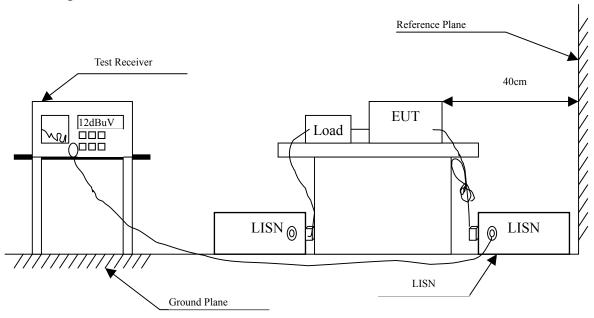
# 2.1. Test Equipment

|   | Equipment                | Manufacturer | Model No. / Serial No. | Last Cal.  | Remark      |
|---|--------------------------|--------------|------------------------|------------|-------------|
| X | Test Receiver            | R & S        | ESCS 30 / 825442/018   | Sep., 2011 |             |
| X | Artificial Mains Network | R & S        | ENV4200 / 848411/10    | Feb., 2012 | Peripherals |
| X | LISN                     | R & S        | ESH3-Z5 / 825562/002   | Feb., 2012 | EUT         |
|   | DC LISN                  | Schwarzbeck  | 8226 / 176             | Mar, 2012  | EUT         |
| X | Pulse Limiter            | R & S        | ESH3-Z2 / 357.8810.52  | Feb., 2012 |             |
|   | No.1 Shielded Room       |              |                        |            |             |

### Note:

- 1. All equipments are calibrated every one year.
- 2. The test instruments marked by "X" are used to measure the final test results.

# 2.2. Test Setup





#### 2.3. Limits

| FCC Part 15 Subpart C Paragraph 15.207 (dBuV) Limit |        |       |  |  |  |  |  |  |
|-----------------------------------------------------|--------|-------|--|--|--|--|--|--|
| Frequency                                           | Limits |       |  |  |  |  |  |  |
| MHz                                                 | QP     | AVG   |  |  |  |  |  |  |
| 0.15 - 0.50                                         | 66-56  | 56-46 |  |  |  |  |  |  |
| 0.50-5.0                                            | 56     | 46    |  |  |  |  |  |  |
| 5.0 - 30                                            | 60     | 50    |  |  |  |  |  |  |

#### 2.4. Test Procedure

The EUT and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50 ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm /50uH coupling impedance with 50ohm termination. (Please refers to the block diagram of the test setup and photographs.)

Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.4: 2003 on conducted measurement.

Conducted emissions were invested over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9kHz.

### 2.5. Uncertainty

± 2.26 dB



### 2.6. Test Result of Conducted Emission

Product : Tablet PC

Test Item : Conducted Emission Test

Power Line : Line 1

Test Mode : Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW) (2437MHz)

| Frequency  | Correct | Reading | Measurement | Margin  | Limit  |
|------------|---------|---------|-------------|---------|--------|
|            | Factor  | Level   | Level       |         |        |
| MHz        | dB      | dBuV    | dBuV        | dB      | dBuV   |
| Line 1     |         |         |             |         |        |
| Quasi-Peak |         |         |             |         |        |
| 0.162      | 9.840   | 38.430  | 48.270      | -17.387 | 65.657 |
| 0.220      | 9.840   | 32.510  | 42.350      | -21.650 | 64.000 |
| 0.252      | 9.840   | 27.690  | 37.530      | -25.556 | 63.086 |
| 0.459      | 9.840   | 23.570  | 33.410      | -23.761 | 57.171 |
| 1.072      | 9.850   | 21.090  | 30.940      | -25.060 | 56.000 |
| 2.357      | 9.860   | 15.750  | 25.610      | -30.390 | 56.000 |
| Average    |         |         |             |         |        |
| 0.162      | 9.840   | 22.270  | 32.110      | -23.547 | 55.657 |
| 0.220      | 9.840   | 23.050  | 32.890      | -21.110 | 54.000 |
| 0.252      | 9.840   | 15.460  | 25.300      | -27.786 | 53.086 |
| 0.459      | 9.840   | 15.610  | 25.450      | -21.721 | 47.171 |
| 1.072      | 9.850   | 20.210  | 30.060      | -15.940 | 46.000 |
| 2.357      | 9.860   | 12.670  | 22.530      | -23.470 | 46.000 |

- 1. All Reading Levels are Quasi-Peak and average value.
- 2. "means the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor



Test Item : Conducted Emission Test

Power Line : Line 2

Test Mode : Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW) (2437MHz)

| Frequency  | Correct | Reading | Measurement | Margin  | Limit  |
|------------|---------|---------|-------------|---------|--------|
|            | Factor  | Level   | Level       |         |        |
| MHz        | dB      | dBuV    | dBuV        | dB      | dBuV   |
| Line 2     |         |         |             |         |        |
| Quasi-Peak |         |         |             |         |        |
| 0.177      | 9.840   | 37.460  | 47.300      | -17.929 | 65.229 |
| 0.216      | 9.840   | 34.830  | 44.670      | -19.444 | 64.114 |
| 0.392      | 9.840   | 26.720  | 36.560      | -22.526 | 59.086 |
| 0.490      | 9.840   | 21.490  | 31.330      | -24.956 | 56.286 |
| 1.072      | 9.840   | 21.050  | 30.890      | -25.110 | 56.000 |
| 1.502      | 9.850   | 18.430  | 28.280      | -27.720 | 56.000 |
| Average    |         |         |             |         |        |
| 0.177      | 9.840   | 22.580  | 32.420      | -22.809 | 55.229 |
| 0.216      | 9.840   | 27.490  | 37.330      | -16.784 | 54.114 |
| 0.392      | 9.840   | 22.570  | 32.410      | -16.676 | 49.086 |
| 0.490      | 9.840   | 13.170  | 23.010      | -23.276 | 46.286 |
| 1.072      | 9.840   | 19.840  | 29.680      | -16.320 | 46.000 |
| 1.502      | 9.850   | 17.490  | 27.340      | -18.660 | 46.000 |

- 1. All Reading Levels are Quasi-Peak and average value.
- 2. "means the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor



# 3. Peak Power Output

# 3.1. Test Equipment

RF Conducted Measurement:

| Item | 儀器名稱 |                   | 製造廠     | 型號 /序號              | 上次校正日期     | 下次校正日期     |
|------|------|-------------------|---------|---------------------|------------|------------|
| 1    | X    | Power Meter       | Anritsu | ML2495A/6K00003357  | May, 2011  | May., 2012 |
| 2    | X    | Power Sensor      | Anritsu | MA2411B/0738448     | Jun, 2011  | Jun, 2012  |
| 3    |      | Spectrum Analyzer | R&S     | FSP40 / 100170      | Jun, 2011  | Jun, 2012  |
| 4    |      | Spectrum Analyzer | Agilent | E4407B / US39440758 | Jun, 2011  | Jun, 2012  |
| 5    | X    | Spectrum Analyzer | Agilent | N9010A / MY48030495 | Apr., 2011 | Apr., 2012 |

### No.3 OATS

### Note:

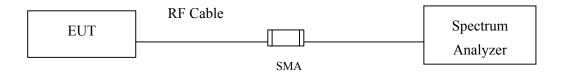
- 1. All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.
- 2. The test instruments marked with "X" are used to measure the final test results.

# 3.2. Test Setup

Average Power For different Data Rate (Mbps)



Peak Power Measurement



### 3.3. Limits

The maximum peak power shall be less 1 Watt.



# 3.4. Test Procedure

The EUT was tested according to DTS test procedure of Jan. 2012 KDB558074 for compliance to FCC 47CFR 15.247 requirements.

# 3.5. Uncertainty

 $\pm~1.27~dB$ 



# 3.6. Test Result of Peak Power Output

Product : Tablet PC

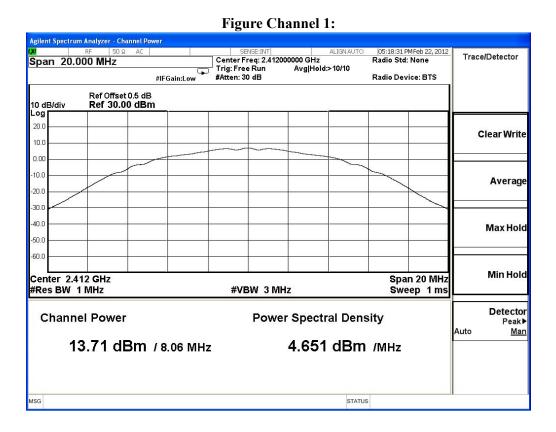
Test Item : Peak Power Output Data

Test Site : No.3 OATS

Test Mode : Mode 1: Transmit (802.11b 1Mbps)

| Channel No | Frequency (MHz) | For d | _      | e Power<br>ata Rate (N | Лbps) | Peak<br>Power | Required | Dogula |
|------------|-----------------|-------|--------|------------------------|-------|---------------|----------|--------|
| Channel No |                 | 1     | 2      | 5.5                    | 11    | 1             | Limit    | Result |
|            |                 |       | Measur |                        |       |               |          |        |
| 01         | 2412            | 11.11 |        |                        |       | 13.71         | <30dBm   | Pass   |
| 06         | 2437            | 11.15 | 11.11  | 11.09                  | 11.04 | 13.81         | <30dBm   | Pass   |
| 11         | 2462            | 11.07 |        |                        |       | 13.95         | <30dBm   | Pass   |

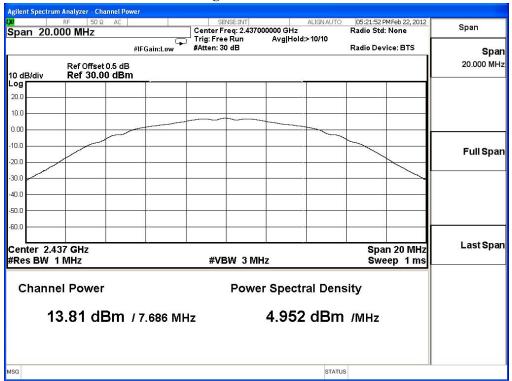
- 1. Peak Power Output Value = Reading value on Spectrum Analyzer + cable loss (Use the spectrum analyzer's integrated channel power measurement function)
- 2. Average Power for different data rate = Reading value on Power Meter +cable loss



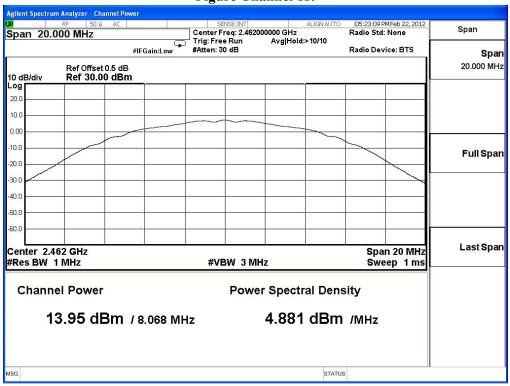
Page: 17 of 128



### **Figure Channel 6:**



# **Figure Channel 11:**





Test Item : Peak Power Output Data

Test Site : No.3 OATS

Test Mode : Mode 2: Transmit (802.11g 6Mbps)

|            |           |       | Average Power                        |       |       |       |      |       |       |       |          |        |
|------------|-----------|-------|--------------------------------------|-------|-------|-------|------|-------|-------|-------|----------|--------|
|            | Frequency |       | For different Data Rate (Mbps) Power |       |       |       |      |       |       |       | Required |        |
| Channel No | (MHz)     | 6     | 9                                    | 12    | 18    | 24    | 36   | 48    | 54    | 6     | Limit    | Result |
|            |           |       | Measurement Level (dBm)              |       |       |       |      |       |       |       |          |        |
| 01         | 2412      | 13.13 |                                      |       |       |       | -    |       |       | 21.64 | <30dBm   | Pass   |
| 06         | 2437      | 13.25 | 13.23                                | 13.19 | 13.17 | 13.14 | 13.1 | 13.08 | 13.03 | 21.72 | <30dBm   | Pass   |
| 11         | 2462      | 13.08 |                                      |       |       |       |      |       |       | 21.67 | <30dBm   | Pass   |

#### Note:

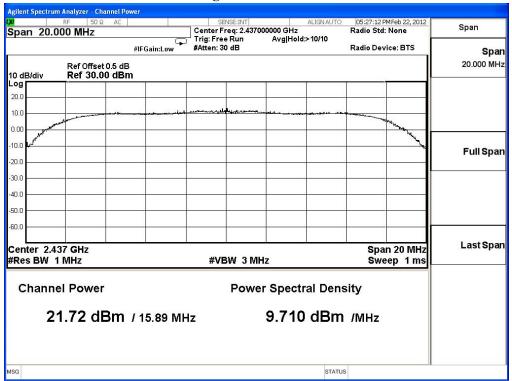
- 1. Peak Power Output Value = Reading value on Spectrum Analyzer + cable loss (Use the spectrum analyzer's integrated channel power measurement function)
- 2. Average Power for different data rate = Reading value on Power Meter +cable loss

#### Agilent Spectrum Analyzer - Channel Power SENSE:INT Center Freq: 2.412000000 GHz Trig: Free Run Avg|Hold #Atten: 30 dB 05:26:03 PMFeb 22 Radio Std: None Span Span 20.000 MHz Avg|Hold:>10/10 Radio Device: BTS #IFGain:Low Span 20.000 MHz Ref Offset 0.5 dB Ref 30.00 dBm 10 dB/div 10.0 0.00 10.0 Full Span 20.0 30.0 40.0 -50.0 -60.0 Last Span Center 2.412 GHz Span 20 MHz #Res BW 1 MHz #VBW 3 MHz Sweep 1 ms **Channel Power Power Spectral Density** 21.64 dBm / 15.89 MHz 9.631 dBm /MHz STATUS

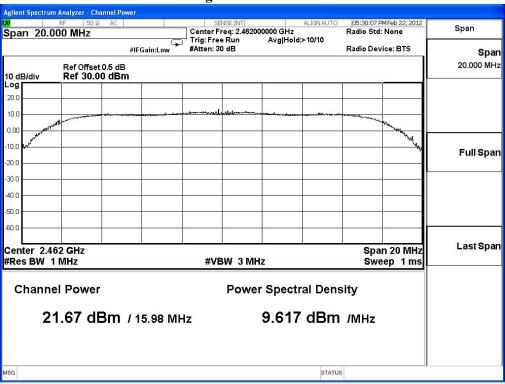
### Figure Channel 1:



### **Figure Channel 6:**



### **Figure Channel 11:**





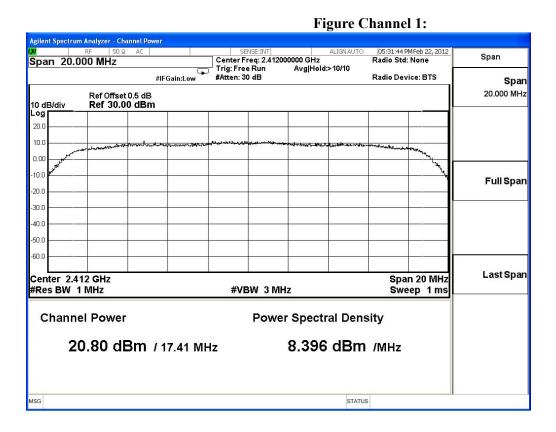
Test Item : Peak Power Output Data

Test Site : No.3 OATS

Test Mode : Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW)

|            | Eraguanav       |       | Average Power Peak For different Data Rate (Mbps) Power |       |       |       |       |      |       |       | Required |        |
|------------|-----------------|-------|---------------------------------------------------------|-------|-------|-------|-------|------|-------|-------|----------|--------|
| Channel No | Frequency (MHz) | 7.2   | 14.4                                                    | 21.7  | 28.9  | 43.3  | 57.8  | 65   | 72.2  | 7.2   | Limit    | Result |
|            |                 |       | Measurement Level (dBm)                                 |       |       |       |       |      |       |       |          |        |
| 01         | 2412            | 12.19 |                                                         | 1     |       |       | 1     | 1    | -     | 20.8  | <30dBm   | Pass   |
| 06         | 2437            | 12.3  | 12.27                                                   | 12.24 | 12.21 | 12.19 | 12.14 | 12.1 | 12.08 | 20.93 | <30dBm   | Pass   |
| 11         | 2462            | 12.06 |                                                         |       |       |       |       |      | -     | 20.64 | <30dBm   | Pass   |

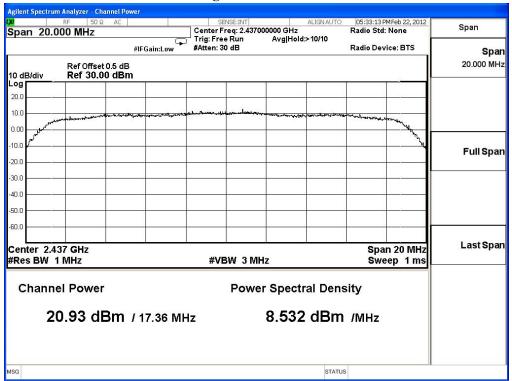
- 1. Peak Power Output Value = Reading value on Spectrum Analyzer + cable loss (Use the spectrum analyzer's integrated channel power measurement function)
- 2. Average Power for different data rate = Reading value on Power Meter +cable loss



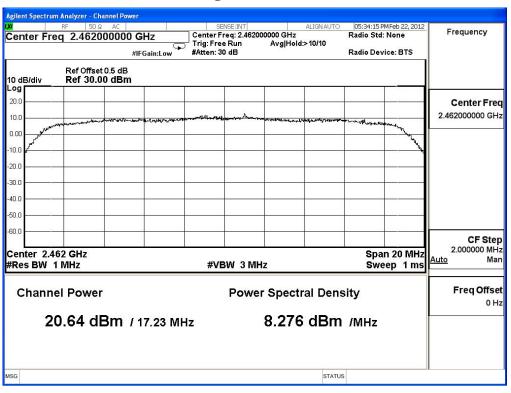
Page: 21 of 128



### **Figure Channel 6:**



### Figure Channel 11:





### 4. Radiated Emission

# 4.1. Test Equipment

The following test equipment are used during the radiated emission test:

| Test Site |   | Equipment         | Manufacturer    | Model No./Serial No.  | Last Cal.  |
|-----------|---|-------------------|-----------------|-----------------------|------------|
| ⊠Site # 3 | X | Bilog Antenna     | Schaffner Chase | CBL6112B/2673         | Sep., 2011 |
|           | X | Horn Antenna      | Schwarzbeck     | BBHA9120D/D305        | Sep., 2011 |
|           | X | Horn Antenna      | Schwarzbeck     | BBHA9170/208          | Jul., 2011 |
|           | X | Pre-Amplifier     | Agilent         | 8447D/2944A09549      | Sep., 2011 |
|           | X | Spectrum Analyzer | Agilent         | E4407B / US39440758   | May, 2011  |
|           | X | Test Receiver     | R & S           | ESCS 30/ 825442/018   | Sep., 2011 |
|           | X | Coaxial Cable     | QuieTek         | QTK-CABLE/ CAB5       | Feb., 2012 |
|           | X | Controller        | QuieTek         | QTK-CONTROLLER/ CTRL3 | N/A        |
|           | X | Coaxial Switch    | Anritsu         | MP59B/6200265729      | N/A        |

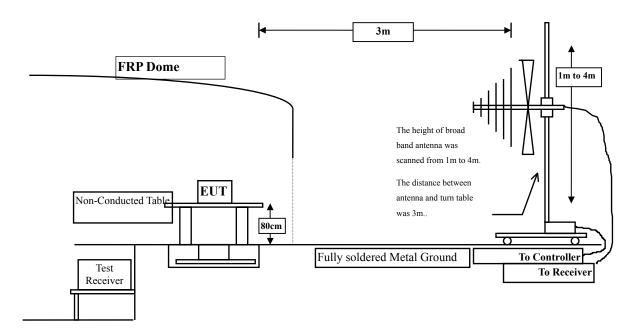
Note: 1. All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.

2. The test instruments marked with "X" are used to measure the final test results.

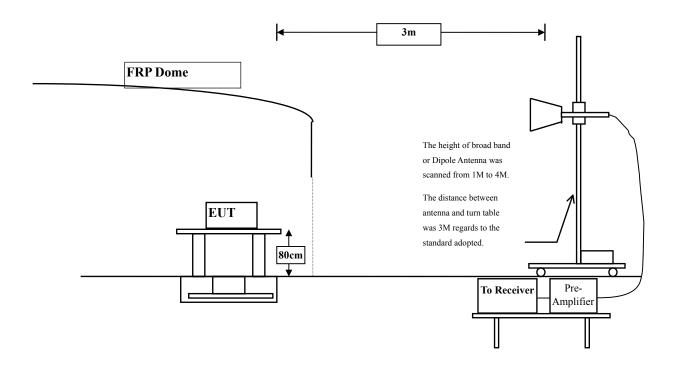


# 4.2. Test Setup

Radiated Emission Below 1GHz



Radiated Emission Above 1GHz



Page: 24 of 128



# 4.3. Limits

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 20dB below the level of the fundamental or to the general radiated emission limits in paragraph 15.209, whichever is the lesser attenuation.

| FCC Part 15 Subpart C Paragraph 15.209(a) Limits |          |           |  |  |  |  |  |  |
|--------------------------------------------------|----------|-----------|--|--|--|--|--|--|
| Frequency<br>MHz                                 | uV/m @3m | dBuV/m@3m |  |  |  |  |  |  |
| 30-88                                            | 100      | 40        |  |  |  |  |  |  |
| 88-216                                           | 150      | 43.5      |  |  |  |  |  |  |
| 216-960                                          | 200      | 46        |  |  |  |  |  |  |
| Above 960                                        | 500      | 54        |  |  |  |  |  |  |

Remarks: E field strength  $(dBuV/m) = 20 \log E$  field strength (uV/m)



#### 4.4. Test Procedure

The EUT was setup according to ANSI C63.4: 2003 and tested according to DTS test procedure of Jan. 2012 KDB558074 for compliance to FCC 47CFR 15.247 requirements.

The EUT is placed on a turn table which is 0.8 meter above ground. The turn table is rotated 360 degrees to determine the position of the maximum emission level. The EUT was positioned such that the distance from antenna to the EUT was 3 meters.

The antenna is scanned between 1 meter and 4 meters to find out the maximum emission level. This is repeated for both horizontal and vertical polarization of the antenna. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.4: 2003 on radiated measurement.

The resolution bandwidth below 1GHz setting on the field strength meter is 120 kHz and above 1GHz is 1MHz.

Radiated emission measurements below 1GHz are made using broadband Bilog antenna and above 1GHz are made using Horn Antennas.

The measurement is divided into the Preliminary Measurement and the Final Measurement.

The suspected frequencies are searched for in Preliminary Measurement with the measurement antenna kept pointed at the source of the emission both in azimuth and elevation, with the polarization of the antenna oriented for maximum response. The antenna is pointed at an angle towards the source of the emission, and the EUT is rotated in both height and polarization to maximize the measured emission. The emission is kept within the illumination area of the 3 dB bandwidth of the antenna.

The worst radiated emission is measured in the Open Area Test Site on the Final Measurement.

The frequency range from 30MHz to 10th harminics is checked.

### 4.5. Uncertainty

- + 3.9 dB above 1GHz
- ± 3.8 dB below 1GHz



#### 4.6. Test Result of Radiated Emission

Product : Tablet PC

Test Item : Harmonic Radiated Emission Data

Test Site : No.3 OATS

Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2412MHz)

| Frequency             | Correct | Reading | Measurement | Margin  | Limit    |
|-----------------------|---------|---------|-------------|---------|----------|
|                       | Factor  | Level   | Level       |         |          |
| MHz                   | dB      | dBuV    | dBuV/m      | dB      | dBuV/m   |
| Horizontal            |         |         |             |         |          |
| <b>Peak Detector:</b> |         |         |             |         |          |
| 4824.000              | 3.261   | 43.250  | 46.511      | -27.489 | 74.000   |
| 7236.000              | 10.650  | 47.180  | 57.830      | -16.170 | 74.000   |
| 9648.000              | 13.337  | 36.340  | 49.676      | -24.324 | 74.000   |
| Average Detector:     |         |         |             |         |          |
| 7236.000              | 10.650  | 41.420  | 52.070      | -1.930  | 54.000   |
| Vertical              |         |         |             |         |          |
| <b>Peak Detector:</b> |         |         |             |         |          |
| 4824.000              | 6.421   | 41.130  | 47.551      | -26.449 | 74.000   |
| 7236.000              | 11.495  | 49.760  | 61.255      | -27.643 | 88.898 * |
| 9648.000              | 13.807  | 36.240  | 50.046      | -23.954 | 74.000   |
| Average Detector:     |         |         |             |         |          |
| 7236.000              | 11.495  | 44.360  | 55.855      | -13.043 | 68.898 * |

<sup>&</sup>quot;\*", means non-restricted bands, limit=fundamental level down 20dBc.

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.



Test Item : Harmonic Radiated Emission Data

Test Site : No.3 OATS

Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2437 MHz)

| Frequency                | Correct | Reading | Measurement | Margin  | Limit  |
|--------------------------|---------|---------|-------------|---------|--------|
|                          | Factor  | Level   | Level       |         |        |
| MHz                      | dB      | dBuV    | dBuV/m      | dB      | dBuV/m |
| Horizontal               |         |         |             |         | _      |
| <b>Peak Detector:</b>    |         |         |             |         |        |
| 4874.000                 | 3.038   | 41.840  | 44.877      | -29.123 | 74.000 |
| 7311.000                 | 11.795  | 43.730  | 55.524      | -18.476 | 74.000 |
| 9748.000                 | 12.635  | 37.210  | 49.845      | -24.155 | 74.000 |
|                          |         |         |             |         |        |
| <b>Average Detector:</b> |         |         |             |         |        |
| 7311.000                 | 11.795  | 37.250  | 49.044      | -4.956  | 54.000 |
| Vertical                 |         |         |             |         |        |
| Peak Detector:           |         |         |             |         |        |
| 4874.000                 | 5.812   | 40.721  | 46.532      | -27.468 | 74.000 |
| 7311.000                 | 12.630  | 46.690  | 59.319      | -14.681 | 74.000 |
| 9748.000                 | 13.126  | 37.629  | 50.755      | -23.245 | 74.000 |
|                          |         |         |             |         |        |
| <b>Average Detector:</b> |         |         |             |         |        |
| 7311.000                 | 12.630  | 40.740  | 53.369      | -0.631  | 54.000 |

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.



Test Item : Harmonic Radiated Emission Data

Test Site : No.3 OATS

Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2462 MHz)

| Frequency                | Correct | Reading | Measurement | Margin  | Limit  |
|--------------------------|---------|---------|-------------|---------|--------|
|                          | Factor  | Level   | Level       |         |        |
| MHz                      | dB      | dBuV    | dBuV/m      | dB      | dBuV/m |
| Horizontal               |         |         |             |         | _      |
| Peak Detector:           |         |         |             |         |        |
| 4924.000                 | 2.858   | 39.450  | 42.307      | -31.693 | 74.000 |
| 7386.000                 | 12.127  | 40.660  | 52.788      | -21.212 | 74.000 |
| 9848.000                 | 12.852  | 37.190  | 50.043      | -23.957 | 74.000 |
|                          |         |         |             |         |        |
| <b>Average Detector:</b> |         |         |             |         |        |
|                          |         |         |             |         |        |
| Vertical                 |         |         |             |         |        |
| <b>Peak Detector:</b>    |         |         |             |         |        |
| 4924.000                 | 5.521   | 40.330  | 45.850      | -28.150 | 74.000 |
| 7386.000                 | 13.254  | 42.610  | 55.864      | -18.136 | 74.000 |
| 9848.000                 | 13.367  | 36.700  | 50.067      | -23.933 | 74.000 |
|                          |         |         |             |         |        |
| <b>Average Detector:</b> |         |         |             |         |        |
| 7386.000                 | 13.254  | 35.200  | 48.454      | -5.546  | 54.000 |

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.



Test Item : Harmonic Radiated Emission Data

Test Site : No.3 OATS

Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2412MHz)

| Frequency             | Correct | Reading | Measurement | Margin  | Limit  |
|-----------------------|---------|---------|-------------|---------|--------|
|                       | Factor  | Level   | Level       |         |        |
| MHz                   | dB      | dBuV    | dBuV/m      | dB      | dBuV/m |
| Horizontal            |         |         |             |         |        |
| <b>Peak Detector:</b> |         |         |             |         |        |
| 4824.000              | 3.261   | 42.680  | 45.941      | -28.059 | 74.000 |
| 7236.000              | 10.650  | 52.220  | 62.870      | -11.130 | 74.000 |
| 9648.000              | 13.337  | 35.780  | 49.116      | -24.884 | 74.000 |
| Average Detector:     |         |         |             |         |        |
| 7236.000              | 10.650  | 35.260  | 45.910      | -8.090  | 54.000 |
| Vertical              |         |         |             |         |        |
| <b>Peak Detector:</b> |         |         |             |         |        |
| 4824.000              | 6.421   | 40.980  | 47.401      | -26.599 | 74.000 |
| 7236.000              | 11.495  | 57.700  | 69.195      | -4.805  | 74.000 |
| 9648.000              | 13.807  | 35.600  | 49.406      | -24.594 | 74.000 |
| Average Detector:     |         |         |             |         |        |
| 7236.000              | 11.495  | 39.850  | 51.345      | -2.655  | 54.000 |

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.



Test Item : Harmonic Radiated Emission Data

Test Site : No.3 OATS

Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2437 MHz)

| Frequency                | Correct | Reading | Measurement | Margin  | Limit  |
|--------------------------|---------|---------|-------------|---------|--------|
|                          | Factor  | Level   | Level       |         |        |
| MHz                      | dB      | dBuV    | dBuV/m      | dB      | dBuV/m |
| Horizontal               |         |         |             |         |        |
| Peak Detector:           |         |         |             |         |        |
| 4874.000                 | 3.038   | 41.580  | 44.617      | -29.383 | 74.000 |
| 7311.000                 | 11.795  | 50.820  | 62.614      | -11.386 | 74.000 |
| 9748.000                 | 12.635  | 36.690  | 49.325      | -24.675 | 74.000 |
|                          |         |         |             |         |        |
| <b>Average Detector:</b> |         |         |             |         |        |
| 7311.000                 | 11.795  | 33.500  | 45.294      | -8.706  | 54.000 |
|                          |         |         |             |         |        |
| <b>Peak Detector:</b>    |         |         |             |         |        |
| 4874.000                 | 5.812   | 41.060  | 46.871      | -27.129 | 74.000 |
| 7311.000                 | 12.630  | 54.320  | 66.949      | -7.051  | 74.000 |
| 9748.000                 | 13.126  | 36.910  | 50.036      | -23.964 | 74.000 |
|                          |         |         |             |         |        |
| <b>Average Detector:</b> |         |         |             |         |        |
| 7311.000                 | 12.630  | 36.380  | 49.009      | -4.991  | 54.000 |

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.



Test Item : Harmonic Radiated Emission Data

Test Site : No.3 OATS

Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2462 MHz)

| Frequency                | Correct | Reading | Measurement | Margin  | Limit  |
|--------------------------|---------|---------|-------------|---------|--------|
|                          | Factor  | Level   | Level       |         |        |
| MHz                      | dB      | dBuV    | dBuV/m      | dB      | dBuV/m |
| Horizontal               |         |         |             |         |        |
| Peak Detector:           |         |         |             |         |        |
| 4924.000                 | 2.858   | 41.960  | 44.817      | -29.183 | 74.000 |
| 7386.000                 | 12.127  | 47.610  | 59.738      | -14.262 | 74.000 |
| 9848.000                 | 12.852  | 36.030  | 48.883      | -25.117 | 74.000 |
|                          |         |         |             |         |        |
| <b>Average Detector:</b> |         |         |             |         |        |
| 7386.000                 | 12.127  | 29.790  | 41.918      | -12.082 | 54.000 |
| Vertical                 |         |         |             |         |        |
| Peak Detector:           |         |         |             |         |        |
| 4924.000                 | 5.521   | 40.150  | 45.670      | -28.330 | 74.000 |
| 7386.000                 | 13.254  | 50.930  | 64.184      | -9.816  | 74.000 |
| 9848.000                 | 13.367  | 36.790  | 50.157      | -23.843 | 74.000 |
|                          |         |         |             |         |        |
| <b>Average Detector:</b> |         |         |             |         |        |
| 7386.000                 | 13.254  | 33.060  | 46.314      | -7.686  | 54.000 |

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.



Test Item : Harmonic Radiated Emission Data

Test Site : No.3 OATS

Test Mode : Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW)(2412MHz)

| Frequency      | Correct<br>Factor | Reading<br>Level | Measurement<br>Level | Margin  | Limit    |
|----------------|-------------------|------------------|----------------------|---------|----------|
| MHz            | dB                | dBuV             | dBuV/m               | dB      | dBuV/m   |
| Horizontal     |                   |                  |                      |         |          |
| Peak Detector: |                   |                  |                      |         |          |
| 4824.000       | 3.261             | 41.630           | 44.891               | -29.109 | 74.000   |
| 7236.000       | 10.65             | 48.810           | 59.460               | -14.540 | 94.402 * |
| 9648.000       | 13.336            | 36.830           | 50.166               | -23.834 | 74.000   |

<sup>&</sup>quot;\*", means non-restricted bands, limit=fundamental level down 20dBc.

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.



### **Average Detector:**

| Frequency  | Peak        | <b>Duty Cycle</b> | Measurement | Margin  | Limit       |
|------------|-------------|-------------------|-------------|---------|-------------|
|            | Measurement | Factor            | Level       |         |             |
| MHz        | $dB\mu V/m$ | dB                | $dB\mu V/m$ | dB      | $dB\mu V/m$ |
| Horizontal |             |                   |             |         |             |
| 7236       | 59.46       | -7.363            | 52.097      | -22.305 | 74.402 *    |

<sup>&</sup>quot;\*", means non-restricted bands, limit=fundamental level down 20dBc.

### Note:

- 1. AVG Measurement=Peak Measurement + Duty Cycle Correct Factor
- 2. The Duty Cycle is refer to section 9.

Page: 34 of 128



Test Item : Harmonic Radiated Emission Data

Test Site : No.3 OATS

Test Mode : Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW)(2412MHz)

| Frequency             | Correct<br>Factor | Reading<br>Level | Measurement<br>Level | Margin  | Limit    |
|-----------------------|-------------------|------------------|----------------------|---------|----------|
| MHz                   | dB                | dBuV             | dBuV/m               | dB      | dBuV/m   |
| Vertical              |                   |                  |                      |         |          |
| <b>Peak Detector:</b> |                   |                  |                      |         |          |
| 4824.000              | 6.421             | 41.590           | 48.011               | -25.989 | 74.000   |
| 7236.000              | 11.495            | 51.640           | 63.135               | -26.904 | 90.039 * |
| 9648.000              | 13.807            | 35.550           | 49.356               | -24.644 | 74.000   |

<sup>&</sup>quot;\*", means non-restricted bands, limit=fundamental level down 20dBc.

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.



|         | D ( )            |  |
|---------|------------------|--|
| Average | <b>Detector:</b> |  |
|         |                  |  |

| Frequency | Peak        | Duty Cycle | Measurement | Margin  | Limit       |
|-----------|-------------|------------|-------------|---------|-------------|
|           | Measurement | Factor     | Level       |         |             |
| MHz       | $dB\mu V/m$ | dB         | $dB\mu V/m$ | dB      | $dB\mu V/m$ |
| Vertical  |             |            |             |         |             |
| 7236      | 63.135      | -7.363     | 55.772      | -14.267 | 70.039 *    |

<sup>&</sup>quot;\*", means non-restricted bands, limit=fundamental level down 20dBc.

- 1. AVG Measurement=Peak Measurement + Duty Cycle Correct Factor
- 2. The Duty Cycle is refer to section 9.



Test Item : Harmonic Radiated Emission Data

Test Site : No.3 OATS

Test Mode : Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW) (2437 MHz)

| Frequency      | Correct | Reading | Measurement | Margin  | Limit  |
|----------------|---------|---------|-------------|---------|--------|
|                | Factor  | Level   | Level       |         |        |
| MHz            | dB      | dBuV    | dBuV/m      | dB      | dBuV/m |
| Horizontal     |         |         |             |         | _      |
| Peak Detector: |         |         |             |         |        |
| 4874.000       | 3.038   | 40.870  | 43.907      | -30.093 | 74.000 |
| 7311.000       | 11.795  | 44.280  | 56.074      | -17.926 | 74.000 |
| 9748.000       | 12.635  | 37.130  | 49.765      | -24.235 | 74.000 |

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.



| Average | <b>Detector:</b> |
|---------|------------------|
| Average | Detector:        |

| Frequency  | Peak        | <b>Duty Cycle</b> | Measurement | Margin | Limit       |
|------------|-------------|-------------------|-------------|--------|-------------|
|            | Measurement | Factor            | Level       |        |             |
| MHz        | $dB\mu V/m$ | dB                | $dB\mu V/m$ | dB     | $dB\mu V/m$ |
| Horizontal |             |                   |             |        |             |
| 7311       | 56.074      | -7.363            | 48.711      | -5.289 | 54.000      |

- AVG Measurement=Peak Measurement + Duty Cycle Correct Factor The Duty Cycle is refer to section 9. 1.
- 2.



Test Item : Harmonic Radiated Emission Data

Test Site : No.3 OATS

Test Mode : Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW) (2437 MHz)

| Frequency      | Correct | Reading | Measurement | Margin  | Limit  |
|----------------|---------|---------|-------------|---------|--------|
|                | Factor  | Level   | Level       |         |        |
| MHz            | dB      | dBuV    | dBuV/m      | dB      | dBuV/m |
| Vertical       |         |         |             |         | -      |
| Peak Detector: |         |         |             |         |        |
| 4874.000       | 5.812   | 38.360  | 44.171      | -29.829 | 74.000 |
| 7311.000       | 12.630  | 47.800  | 60.429      | -13.571 | 74.000 |
| 9748.000       | 13.126  | 37.230  | 50.356      | -23.644 | 74.000 |

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.



| Average | <b>Detector:</b> |
|---------|------------------|
| Average | Detector:        |

| Frequency | Peak        | Duty Cycle | Measurement | Margin | Limit       |
|-----------|-------------|------------|-------------|--------|-------------|
|           | Measurement | Factor     | Level       |        |             |
| MHz       | $dB\mu V/m$ | dB         | $dB\mu V/m$ | dB     | $dB\mu V/m$ |
| Vertical  |             |            |             |        |             |
| 7311      | 60.429      | -7.363     | 53.066      | -0.934 | 54.000      |

- AVG Measurement=Peak Measurement + Duty Cycle Correct Factor The Duty Cycle is refer to section 9. 1.
- 2.



Test Item : Harmonic Radiated Emission Data

Test Site : No.3 OATS

Test Mode: Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW) (2462 MHz)

| Frequency      | Correct | Reading | Measurement | Margin  | Limit  |
|----------------|---------|---------|-------------|---------|--------|
|                | Factor  | Level   | Level       |         |        |
| MHz            | dB      | dBuV    | dBuV/m      | dB      | dBuV/m |
| Horizontal     |         |         |             |         |        |
| Peak Detector: |         |         |             |         |        |
| 4924.000       | 2.858   | 39.760  | 42.617      | -31.383 | 74.000 |
| 7386.000       | 12.127  | 43.790  | 55.918      | -18.082 | 74.000 |
| 9848.000       | 12.852  | 37.210  | 50.063      | -23.937 | 74.000 |

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.



| Average | <b>Detector:</b> |
|---------|------------------|
| Average | Detector:        |

| Frequency  | Peak        | Duty Cycle | Measurement | Margin | Limit       |
|------------|-------------|------------|-------------|--------|-------------|
|            | Measurement | Factor     | Level       |        |             |
| MHz        | $dB\mu V/m$ | dB         | $dB\mu V/m$ | dB     | $dB\mu V/m$ |
| Horizontal |             |            |             |        |             |
| 7386       | 55.918      | -7.363     | 48.555      | -5.445 | 54.000      |

- AVG Measurement=Peak Measurement + Duty Cycle Correct Factor The Duty Cycle is refer to section 9. 1.
- 2.



Test Item : Harmonic Radiated Emission Data

Test Site : No.3 OATS

Test Mode: Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW) (2462 MHz)

| Frequency             | Correct | Reading | Measurement | Margin  | Limit  |
|-----------------------|---------|---------|-------------|---------|--------|
|                       | Factor  | Level   | Level       |         |        |
| MHz                   | dB      | dBuV    | dBuV/m      | dB      | dBuV/m |
| Vertical              |         |         |             |         |        |
| <b>Peak Detector:</b> |         |         |             |         |        |
| 4924.000              | 5.521   | 38.500  | 44.020      | -29.980 | 74.000 |
| 7386.000              | 13.254  | 47.200  | 60.454      | -13.546 | 74.000 |
| 9848.000              | 13.367  | 37.010  | 50.377      | -23.623 | 74.000 |

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.



**Average Detector:** 

| Frequency | Peak        | Duty Cycle | Measurement | Margin | Limit       |
|-----------|-------------|------------|-------------|--------|-------------|
|           | Measurement | Factor     | Level       |        |             |
| MHz       | $dB\mu V/m$ | dB         | $dB\mu V/m$ | dB     | $dB\mu V/m$ |
| Vertical  |             |            |             |        |             |
| 7386      | 60.454      | -7.363     | 53.091      | -0.909 | 54.000      |

- 1. AVG Measurement=Peak Measurement + Duty Cycle Correct Factor
- 2. The Duty Cycle is refer to section 9.



Test Item : Harmonic Radiated Emission Data

Test Site : No.3 OATS

Test Mode : Mode 4: Transmit (802.11b 1Mbps)-Inter modulation

(802.11b 2412MHz+Bluetooth 1Mbps 2441MHz)

| Frequency                | Correct | Reading | Measurement | Margin  | Limit    |
|--------------------------|---------|---------|-------------|---------|----------|
|                          | Factor  | Level   | Level       |         |          |
| MHz                      | dB      | dBuV    | dBuV/m      | dB      | dBuV/m   |
| Horizontal               |         |         |             |         |          |
| <b>Peak Detector:</b>    |         |         |             |         |          |
| 4824.000                 | 3.261   | 38.480  | 41.741      | -32.259 | 74.000   |
| 4882.000                 | 3.001   | 37.910  | 40.911      | -33.089 | 74.000   |
| 7236.000                 | 10.650  | 39.850  | 50.500      | -23.500 | 74.000   |
| 7323.000                 | 11.846  | 35.480  | 47.327      | -26.673 | 74.000   |
| 9648.000                 | 13.337  | 36.540  | 49.876      | -24.124 | 74.000   |
| 9764.000                 | 12.563  | 36.430  | 48.993      | -25.007 | 74.000   |
|                          |         |         |             |         |          |
| <b>Average Detector:</b> |         |         |             |         |          |
|                          |         |         |             |         |          |
| Vertical                 |         |         |             |         |          |
| Peak Detector:           |         |         |             |         |          |
| 4824.000                 | 6.421   | 37.560  | 43.981      | -30.019 | 74.000   |
| 4882.000                 | 5.713   | 36.930  | 42.644      | -31.356 | 74.000   |
| 7236.000                 | 11.495  | 49.330  | 60.825      | -28.065 | 88.898 * |
| 7323.000                 | 12.727  | 35.540  | 48.268      | -25.732 | 74.000   |
| 9648.000                 | 13.807  | 36.020  | 49.826      | -24.174 | 74.000   |
| 9764.000                 | 13.028  | 37.040  | 50.068      | -23.932 | 74.000   |
| <b>Average Detector:</b> |         |         |             |         |          |
| 7236.000                 | 11.495  | 44.160  | 55.655      | -7.243  | 62.898 * |

<sup>&</sup>quot;\*", means non-restricted bands, limit=fundamental level down 20dBc.

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.



Test Item : Harmonic Radiated Emission Data

Test Site : No.3 OATS

Test Mode : Mode 4: Transmit (802.11b 1Mbps)-Inter modulation

(802.11b 2437MHz+Bluetooth 1Mbps 2402MHz)

| Frequency                | Correct | Reading | Measurement | Margin  | Limit  |
|--------------------------|---------|---------|-------------|---------|--------|
|                          | Factor  | Level   | Level       |         |        |
| MHz                      | dB      | dBuV    | dBuV/m      | dB      | dBuV/m |
| Horizontal               |         |         |             |         |        |
| Peak Detector:           |         |         |             |         |        |
| 4804.000                 | 3.327   | 37.100  | 40.427      | -33.573 | 74.000 |
| 4874.000                 | 3.038   | 37.810  | 40.847      | -33.153 | 74.000 |
| 7206.000                 | 10.136  | 36.860  | 46.996      | -27.004 | 74.000 |
| 7311.000                 | 11.795  | 42.180  | 53.974      | -20.026 | 74.000 |
| 9608.000                 | 13.706  | 35.560  | 49.266      | -24.734 | 74.000 |
| 9748.000                 | 12.635  | 36.820  | 49.455      | -24.545 | 74.000 |
| <b>Average Detector:</b> |         |         |             |         |        |
|                          |         |         |             |         |        |
| Vertical                 |         |         |             |         |        |
| <b>Peak Detector:</b>    |         |         |             |         |        |
| 4804.000                 | 36.974  | 37.400  | 44.037      | -29.963 | 74.000 |
| 4874.000                 | 36.080  | 39.550  | 45.361      | -28.639 | 74.000 |
| 7206.000                 | 39.397  | 36.280  | 47.285      | -26.715 | 74.000 |
| 7311.000                 | 12.630  | 45.750  | 58.379      | -15.621 | 74.000 |
| 9608.000                 | 42.642  | 35.970  | 50.073      | -23.927 | 74.000 |
| 9748.000                 | 13.126  | 36.630  | 49.756      | -24.244 | 74.000 |
| <b>Average Detector:</b> |         |         |             |         |        |
| 7311.000                 | 12.630  | 39.860  | 52.489      | -1.511  | 54.000 |
|                          |         |         |             |         |        |

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.



Test Item : Harmonic Radiated Emission Data

Test Site : No.3 OATS

Test Mode : Mode 4: Transmit (802.11b 1Mbps)-Inter modulation

(802.11b 2462MHz+Bluetooth 1Mbps 2480MHz)

| Frequency                | Correct | Reading | Measurement | Margin  | Limit  |
|--------------------------|---------|---------|-------------|---------|--------|
|                          | Factor  | Level   | Level       |         |        |
| MHz                      | dB      | dBuV    | dBuV/m      | dB      | dBuV/m |
| Horizontal               |         |         |             |         |        |
| Peak Detector:           |         |         |             |         |        |
| 4924.000                 | 2.858   | 37.880  | 40.737      | -33.263 | 74.000 |
| 4960.000                 | 5.557   | 37.360  | 42.917      | -11.083 | 54.000 |
| 7386.000                 | 12.127  | 36.840  | 48.968      | -25.032 | 74.000 |
| 7440.000                 | 13.426  | 35.290  | 48.715      | -5.285  | 54.000 |
| 9848.000                 | 12.852  | 36.760  | 49.613      | -24.387 | 74.000 |
| 9920.000                 | 13.958  | 36.180  | 50.138      | -3.862  | 54.000 |
| <b>Average Detector:</b> |         |         |             |         |        |
|                          |         |         |             |         |        |
| Vertical                 |         |         |             |         |        |
| <b>Peak Detector:</b>    |         |         |             |         |        |
| 4924.000                 | 5.521   | 37.780  | 43.300      | -30.700 | 74.000 |
| 4960.000                 | 5.557   | 37.330  | 42.887      | -31.113 | 74.000 |
| 7386.000                 | 13.254  | 43.800  | 57.054      | -16.946 | 74.000 |
| 7440.000                 | 13.426  | 34.790  | 48.215      | -25.785 | 74.000 |
| 9848.000                 | 13.367  | 36.540  | 49.907      | -24.093 | 74.000 |
| 9920.000                 | 13.958  | 35.990  | 49.948      | -24.052 | 74.000 |
| <b>Average Detector:</b> |         |         |             |         |        |
| 7386.000                 | 13.254  | 37.450  | 50.704      | -3.296  | 54.000 |
|                          |         |         |             |         |        |

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.



Test Item : Harmonic Radiated Emission Data

Test Site : No.3 OATS

Test Mode : Mode 5: Transmit (802.11g 6Mbps)-Inter modulation

(802.11g 2412MHz+Bluetooth 1Mbps 2441MHz)

| Frequency                | Correct | Reading | Measurement | Margin  | Limit  |
|--------------------------|---------|---------|-------------|---------|--------|
|                          | Factor  | Level   | Level       |         |        |
| MHz                      | dB      | dBuV    | dBuV/m      | dB      | dBuV/m |
| Horizontal               |         |         |             |         |        |
| Peak Detector:           |         |         |             |         |        |
| 4824.000                 | 3.261   | 38.510  | 41.771      | -32.229 | 74.000 |
| 4882.000                 | 3.001   | 37.160  | 40.161      | -33.839 | 74.000 |
| 7236.000                 | 10.650  | 49.080  | 59.730      | -14.270 | 74.000 |
| 7323.000                 | 11.846  | 35.820  | 47.667      | -26.333 | 74.000 |
| 9648.000                 | 13.337  | 36.360  | 49.696      | -24.304 | 74.000 |
| 9764.000                 | 12.563  | 36.510  | 49.073      | -24.927 | 74.000 |
| <b>Average Detector:</b> |         |         |             |         |        |
| 7236.000                 | 10.650  | 32.730  | 43.380      | -10.620 | 54.000 |
| Vertical                 |         |         |             |         |        |
| Peak Detector:           |         |         |             |         |        |
| 4824.000                 | 6.421   | 40.810  | 47.231      | -26.769 | 74.000 |
| 4882.000                 | 5.713   | 37.400  | 43.114      | -30.886 | 74.000 |
| 7236.000                 | 11.495  | 57.220  | 68.715      | -5.285  | 74.000 |
| 7323.000                 | 12.727  | 35.270  | 47.998      | -26.002 | 74.000 |
| 9648.000                 | 13.807  | 35.920  | 49.726      | -24.274 | 74.000 |
| 9764.000                 | 13.028  | 37.110  | 50.138      | -23.862 | 74.000 |
| <b>Average Detector:</b> |         |         |             |         |        |
| 7236.000                 | 11.495  | 39.690  | 51.185      | -2.815  | 54.000 |
|                          |         |         |             |         |        |

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.



Test Item : Harmonic Radiated Emission Data

Test Site : No.3 OATS

Test Mode : Mode 5: Transmit (802.11g 6Mbps)-Inter modulation

(802.11g 2437MHz+Bluetooth 1Mbps 2402MHz)

| Frequency                | Correct | Reading | Measurement | Margin  | Limit  |
|--------------------------|---------|---------|-------------|---------|--------|
|                          | Factor  | Level   | Level       |         |        |
| MHz                      | dB      | dBuV    | dBuV/m      | dB      | dBuV/m |
| Horizontal               |         |         |             |         |        |
| Peak Detector:           |         |         |             |         |        |
| 4804.000                 | 3.327   | 37.350  | 40.677      | -33.323 | 74.000 |
| 4874.000                 | 3.038   | 38.350  | 41.387      | -32.613 | 74.000 |
| 7206.000                 | 10.136  | 36.390  | 46.526      | -27.474 | 74.000 |
| 7311.000                 | 11.795  | 50.620  | 62.414      | -11.586 | 74.000 |
| 9608.000                 | 13.706  | 35.420  | 49.126      | -24.874 | 74.000 |
| 9748.000                 | 12.635  | 36.130  | 48.765      | -25.235 | 74.000 |
| Average Detector:        |         |         |             |         |        |
| 7311.000                 | 11.795  | 32.770  | 44.564      | -9.436  | 54.000 |
| Peak Detector:           |         |         |             |         |        |
| 4804.000                 | 6.638   | 37.780  | 44.417      | -29.583 | 74.000 |
| 4874.000                 | 5.812   | 39.900  | 45.711      | -28.289 | 74.000 |
| 7206.000                 | 11.005  | 36.850  | 47.855      | -26.145 | 74.000 |
| 7311.000                 | 12.630  | 56.460  | 69.089      | -4.911  | 74.000 |
| 9608.000                 | 14.103  | 36.120  | 50.223      | -23.777 | 74.000 |
| 9748.000                 | 13.126  | 37.320  | 50.446      | -23.554 | 74.000 |
| <b>Average Detector:</b> |         |         |             |         |        |
| 7311.000                 | 12.630  | 38.430  | 51.059      | -2.941  | 54.000 |
|                          |         |         |             |         |        |

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.



Test Item : Harmonic Radiated Emission Data

Test Site : No.3 OATS

Test Mode : Mode 5: Transmit (802.11g 6Mbps)-Inter modulation

(802.11g 2462MHz+Bluetooth 1Mbps 2480MHz)

| Frequency                | Correct | Reading | Measurement | Margin  | Limit  |
|--------------------------|---------|---------|-------------|---------|--------|
|                          | Factor  | Level   | Level       |         |        |
| MHz                      | dB      | dBuV    | dBuV/m      | dB      | dBuV/m |
| Horizontal               |         |         |             |         |        |
| <b>Peak Detector:</b>    |         |         |             |         |        |
| 4924.000                 | 2.857   | 38.110  | 40.967      | -33.033 | 74.000 |
| 4960.000                 | 2.760   | 36.820  | 39.580      | -34.420 | 74.000 |
| 7386.000                 | 12.128  | 46.390  | 58.518      | -15.482 | 74.000 |
| 7440.000                 | 12.566  | 35.030  | 47.596      | -26.404 | 74.000 |
| 9848.000                 | 12.853  | 36.940  | 49.793      | -24.207 | 74.000 |
| 9920.000                 | 13.456  | 36.250  | 49.706      | -24.294 | 74.000 |
| <b>Average Detector:</b> |         |         |             |         |        |
| 7386.000                 | 12.128  | 28.470  | 40.598      | -13.402 | 54.000 |
| Vertical                 |         |         |             |         |        |
| Peak Detector:           |         |         |             |         |        |
| 4924.000                 | 5.521   | 39.210  | 44.730      | -29.270 | 74.000 |
| 4960.000                 | 5.557   | 36.790  | 42.347      | -31.653 | 74.000 |
| 7386.000                 | 13.254  | 51.210  | 64.464      | -9.536  | 74.000 |
| 7440.000                 | 13.426  | 34.550  | 47.975      | -26.025 | 74.000 |
| 9848.000                 | 13.367  | 36.550  | 49.917      | -24.083 | 74.000 |
| 9920.000                 | 13.958  | 36.470  | 50.428      | -23.572 | 74.000 |
| Average Detector:        |         |         |             |         |        |
| 7386.000                 | 13.254  | 33.312  | 46.566      | -7.434  | 54.000 |
|                          |         |         |             |         |        |

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.



Test Item : Harmonic Radiated Emission Data

Test Site : No.3 OATS

Test Mode : Mode 6: Transmit (802.11n MCS0 7.2Mbps 20M-BW)-Inter modulation

(802.11n 2412MHz+Bluetooth 3Mbps 2441MHz)

| Frequency             | Correct | Reading | Measurement | Margin  | Limit    |
|-----------------------|---------|---------|-------------|---------|----------|
|                       | Factor  | Level   | Level       |         |          |
| MHz                   | dB      | dBuV    | dBuV/m      | dB      | dBuV/m   |
| Horizontal            |         |         |             |         |          |
| <b>Peak Detector:</b> |         |         |             |         |          |
| 4824.000              | 6.421   | 38.090  | 44.511      | -29.489 | 74.000   |
| 4882.000              | 3.001   | 37.010  | 40.011      | -33.989 | 74.000   |
| 7236.000              | 11.495  | 48.960  | 60.455      | -33.947 | 94.402 * |
| 7323.000              | 11.847  | 36.310  | 48.157      | -25.843 | 74.000   |
| 9648.000              | 13.806  | 37.090  | 50.896      | -23.104 | 74.000   |
| 9764.000              | 12.563  | 36.310  | 48.873      | -25.127 | 74.000   |

<sup>&</sup>quot;\*", means non-restricted bands, limit=fundamental level down 20dBc.

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.



# **Average Detector:**

| Frequency  | Peak        | <b>Duty Cycle</b> | Measurement | Margin  | Limit       |
|------------|-------------|-------------------|-------------|---------|-------------|
|            | Measurement | Factor            | Level       |         |             |
| MHz        | $dB\mu V/m$ | dB                | $dB\mu V/m$ | dB      | $dB\mu V/m$ |
| Horizontal |             |                   |             |         |             |
| 7236       | 60.455      | -7.363            | 53.092      | -21.310 | 74.402 *    |

<sup>&</sup>quot;\*", means non-restricted bands, limit=fundamental level down 20dBc.

- 1. AVG Measurement=Peak Measurement + Duty Cycle Correct Factor
- 2. The Duty Cycle is refer to section 9.



Test Item : Harmonic Radiated Emission Data

Test Site : No.3 OATS

Test Mode : Mode 6: Transmit (802.11n MCS0 7.2Mbps 20M-BW)-Inter modulation

(802.11n 2412MHz+Bluetooth 3Mbps 2441MHz)

| Frequency             | Correct | Reading | Measurement | Margin  | Limit    |
|-----------------------|---------|---------|-------------|---------|----------|
|                       | Factor  | Level   | Level       |         |          |
| MHz                   | dB      | dBuV    | dBuV/m      | dB      | dBuV/m   |
| Vertical              |         |         |             |         |          |
| <b>Peak Detector:</b> |         |         |             |         |          |
| 4824.000              | 6.421   | 39.810  | 46.231      | -27.769 | 74.000   |
| 4882.000              | 5.713   | 35.700  | 41.414      | -32.586 | 74.000   |
| 7236.000              | 11.495  | 50.190  | 61.685      | -28.354 | 90.039 * |
| 7323.000              | 12.727  | 36.510  | 49.238      | -24.762 | 74.000   |
| 9648.000              | 13.807  | 34.720  | 48.526      | -25.474 | 74.000   |
| 9764.000              | 13.028  | 36.570  | 49.598      | -24.402 | 74.000   |

<sup>&</sup>quot;\*", means non-restricted bands, limit=fundamental level down 20dBc.

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.



# **Average Detector:**

| Fre | equency | Peak        | Duty Cycle | Measurement | Margin  | Limit       |
|-----|---------|-------------|------------|-------------|---------|-------------|
|     |         | Measurement | Factor     | Level       |         |             |
|     | MHz     | $dB\mu V/m$ | dB         | $dB\mu V/m$ | dB      | $dB\mu V/m$ |
| V   | ertical |             |            |             |         |             |
|     | 7236    | 61.685      | -7.363     | 54.322      | -15.717 | 70.039 *    |

<sup>&</sup>quot;\*", means non-restricted bands, limit=fundamental level down 20dBc.

- 1. AVG Measurement=Peak Measurement + Duty Cycle Correct Factor
- 2. The Duty Cycle is refer to section 9.



Test Item : Harmonic Radiated Emission Data

Test Site : No.3 OATS

Test Mode : Mode 6: Transmit (802.11n MCS0 7.2Mbps 20M-BW)-Inter modulation

(802.11n 2437MHz+Bluetooth 3Mbps 2402MHz)

| Frequency      | Correct | Reading | Measurement | Margin  | Limit  |
|----------------|---------|---------|-------------|---------|--------|
|                | Factor  | Level   | Level       |         |        |
| MHz            | dB      | dBuV    | dBuV/m      | dB      | dBuV/m |
| Horizontal     |         |         |             |         |        |
| Peak Detector: |         |         |             |         |        |
| 4804.000       | 3.327   | 38.230  | 41.557      | -32.443 | 74.000 |
| 4874.000       | 3.038   | 40.260  | 43.297      | -30.703 | 74.000 |
| 7206.000       | 10.136  | 35.980  | 46.116      | -27.884 | 74.000 |
| 7311.000       | 11.795  | 43.390  | 55.184      | -18.816 | 74.000 |
| 9608.000       | 13.706  | 34.870  | 48.576      | -25.424 | 74.000 |
| 9748.000       | 12.635  | 36.230  | 48.865      | -25.135 | 74.000 |

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.



| Average | <b>Detector:</b> |
|---------|------------------|
| Average | Detector:        |

| Frequency  | Peak        | Duty Cycle | Measurement | Margin | Limit       |
|------------|-------------|------------|-------------|--------|-------------|
|            | Measurement | Factor     | Level       |        |             |
| MHz        | $dB\mu V/m$ | dB         | $dB\mu V/m$ | dB     | $dB\mu V/m$ |
| Horizontal |             |            |             |        |             |
| 7311       | 55.184      | -7.363     | 47.821      | -6.179 | 54.000      |

- AVG Measurement=Peak Measurement + Duty Cycle Correct Factor The Duty Cycle is refer to section 9. 1.
- 2.



Test Item : Harmonic Radiated Emission Data

Test Site : No.3 OATS

Test Mode : Mode 6: Transmit (802.11n MCS0 7.2Mbps 20M-BW)-Inter modulation

(802.11n 2437MHz+Bluetooth 3Mbps 2402MHz)

| Frequency      | Correct | Reading | Measurement | Margin  | Limit  |
|----------------|---------|---------|-------------|---------|--------|
|                | Factor  | Level   | Level       |         |        |
| MHz            | dB      | dBuV    | dBuV/m      | dB      | dBuV/m |
| Vertical       |         |         |             |         | _      |
| Peak Detector: |         |         |             |         |        |
| 4804.000       | 6.638   | 39.210  | 45.847      | -28.153 | 74.000 |
| 4874.000       | 5.812   | 37.560  | 43.371      | -30.629 | 74.000 |
| 7206.000       | 11.005  | 36.710  | 47.715      | -26.285 | 74.000 |
| 7311.000       | 12.630  | 46.960  | 59.589      | -14.411 | 74.000 |
| 9608.000       | 14.103  | 35.210  | 49.313      | -24.687 | 74.000 |
| 9748.000       | 13.126  | 37.110  | 50.236      | -23.764 | 74.000 |

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.



| Average | <b>Detector:</b> |
|---------|------------------|
| Average | Detector:        |

| Frequency | Peak        | Duty Cycle | Measurement | Margin | Limit       |
|-----------|-------------|------------|-------------|--------|-------------|
|           | Measurement | Factor     | Level       |        |             |
| MHz       | $dB\mu V/m$ | dB         | $dB\mu V/m$ | dB     | $dB\mu V/m$ |
| Vertical  |             |            |             |        |             |
| 7311      | 59.589      | -7.363     | 52.226      | -1.774 | 54.000      |

- AVG Measurement=Peak Measurement + Duty Cycle Correct Factor The Duty Cycle is refer to section 9. 1.
- 2.



Test Item : Harmonic Radiated Emission Data

Test Site : No.3 OATS

Test Mode: Mode 6: Transmit (802.11n MCS0 7.2Mbps 20M-BW)-Inter modulation

(802.11n 2462MHz+Bluetooth 3Mbps 2480MHz)

| Correct | Reading                                                      | Measurement                                                                            | Margin                                                                                                                            | Limit                                                                                                                                                                       |
|---------|--------------------------------------------------------------|----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Factor  | Level                                                        | Level                                                                                  |                                                                                                                                   |                                                                                                                                                                             |
| dB      | dBuV                                                         | dBuV/m                                                                                 | dB                                                                                                                                | dBuV/m                                                                                                                                                                      |
|         |                                                              |                                                                                        |                                                                                                                                   | _                                                                                                                                                                           |
|         |                                                              |                                                                                        |                                                                                                                                   |                                                                                                                                                                             |
| 2.858   | 38.570                                                       | 41.427                                                                                 | -32.573                                                                                                                           | 74.000                                                                                                                                                                      |
| 2.760   | 37.330                                                       | 40.090                                                                                 | -33.910                                                                                                                           | 74.000                                                                                                                                                                      |
| 12.127  | 44.210                                                       | 56.338                                                                                 | -17.662                                                                                                                           | 74.000                                                                                                                                                                      |
| 12.567  | 34.590                                                       | 47.156                                                                                 | -26.844                                                                                                                           | 74.000                                                                                                                                                                      |
| 12.852  | 37.190                                                       | 50.043                                                                                 | -23.957                                                                                                                           | 74.000                                                                                                                                                                      |
| 13.456  | 35.610                                                       | 49.066                                                                                 | -24.934                                                                                                                           | 74.000                                                                                                                                                                      |
|         | Factor<br>dB<br>2.858<br>2.760<br>12.127<br>12.567<br>12.852 | Factor Level dBuV  2.858 38.570 2.760 37.330 12.127 44.210 12.567 34.590 12.852 37.190 | Factor Level Level dBuV/m  2.858 38.570 41.427 2.760 37.330 40.090 12.127 44.210 56.338 12.567 34.590 47.156 12.852 37.190 50.043 | Factor Level dBuV dBuV/m dB  2.858 38.570 41.427 -32.573 2.760 37.330 40.090 -33.910 12.127 44.210 56.338 -17.662 12.567 34.590 47.156 -26.844 12.852 37.190 50.043 -23.957 |

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.



| Average | <b>Detector:</b> |
|---------|------------------|
| Average | Detector:        |

| Frequency  | Peak        | Duty Cycle | Measurement | Margin | Limit       |
|------------|-------------|------------|-------------|--------|-------------|
|            | Measurement | Factor     | Level       |        |             |
| MHz        | $dB\mu V/m$ | dB         | $dB\mu V/m$ | dB     | $dB\mu V/m$ |
| Horizontal |             |            |             |        |             |
| 7386       | 56.338      | -7.363     | 48.975      | -5.025 | 54.000      |

- AVG Measurement=Peak Measurement + Duty Cycle Correct Factor The Duty Cycle is refer to section 9. 1.
- 2.



Test Item : Harmonic Radiated Emission Data

Test Site : No.3 OATS

Test Mode: Mode 6: Transmit (802.11n MCS0 7.2Mbps 20M-BW)-Inter modulation

(802.11n 2462MHz+Bluetooth 3Mbps 2480MHz)

| Frequency             | Correct | Reading | Measurement | Margin  | Limit  |
|-----------------------|---------|---------|-------------|---------|--------|
|                       | Factor  | Level   | Level       |         |        |
| MHz                   | dB      | dBuV    | dBuV/m      | dB      | dBuV/m |
| Vertical              |         | =       |             |         | -      |
| <b>Peak Detector:</b> |         |         |             |         |        |
| 4924.000              | 5.521   | 38.120  | 43.640      | -30.360 | 74.000 |
| 4960.000              | 5.557   | 39.410  | 44.967      | -29.033 | 74.000 |
| 7386.000              | 13.254  | 47.090  | 60.344      | -13.656 | 74.000 |
| 7440.000              | 13.426  | 35.210  | 48.635      | -25.365 | 74.000 |
| 9848.000              | 13.367  | 36.890  | 50.257      | -23.743 | 74.000 |
| 9920.000              | 13.958  | 35.780  | 49.738      | -24.262 | 74.000 |
| 9848.000              | 13.367  | 36.890  | 50.257      | -23.743 | 74.000 |

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.



|         | -                |
|---------|------------------|
| AVAPAGA | <b>Detector:</b> |
| AVCIARC | Detector.        |

| Frequency | Peak<br>Measurement | Duty Cycle<br>Factor | Measurement<br>Level | Margin | Limit       |
|-----------|---------------------|----------------------|----------------------|--------|-------------|
| MHz       | $dB\mu V/m$         | dB                   | $dB\mu V/m$          | dB     | $dB\mu V/m$ |
| Vertical  |                     |                      |                      |        |             |
| 7386      | 60.334              | -7.363               | 52.971               | -1.029 | 54.000      |

- AVG Measurement=Peak Measurement + Duty Cycle Correct Factor The Duty Cycle is refer to section 9. 1.
- 2.



Test Item : General Radiated Emission Data

Test Site : No.3 OATS

Test Mode : Mode 1: Transmit (802.11b 1Mbps)(2437 MHz)

| Frequency  | Correct | Reading | Measurement | Margin  | Limit  |
|------------|---------|---------|-------------|---------|--------|
|            | Factor  | Level   | Level       |         |        |
| MHz        | dB      | dBuV    | dBuV/m      | dB      | dBuV/m |
| Horizontal |         |         |             |         |        |
| 171.620    | -10.242 | 40.257  | 30.015      | -13.485 | 43.500 |
| 346.220    | -2.213  | 39.032  | 36.819      | -9.181  | 46.000 |
| 460.680    | 1.589   | 35.592  | 37.181      | -8.819  | 46.000 |
| 633.340    | 1.880   | 36.522  | 38.402      | -7.598  | 46.000 |
| 749.740    | 3.320   | 32.660  | 35.980      | -10.020 | 46.000 |
| 922.400    | 6.334   | 33.724  | 40.058      | -5.942  | 46.000 |
|            |         |         |             |         |        |
| Vertical   |         |         |             |         |        |
| 171.620    | -8.752  | 38.777  | 30.025      | -13.475 | 43.500 |
| 346.220    | -3.093  | 35.651  | 32.558      | -13.442 | 46.000 |
| 518.880    | -0.546  | 35.639  | 35.093      | -10.907 | 46.000 |
| 633.340    | -3.920  | 42.339  | 38.419      | -7.581  | 46.000 |
| 807.940    | 3.586   | 35.749  | 39.334      | -6.666  | 46.000 |
| 922.400    | 5.534   | 34.823  | 40.357      | -5.643  | 46.000 |

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.



Test Item : General Radiated Emission Data

Test Site : No.3 OATS

Test Mode : Mode 2: Transmit (802.11g 6Mbps)(2437 MHz)

| Frequency  | Correct | Reading | Measurement | Margin  | Limit  |
|------------|---------|---------|-------------|---------|--------|
|            | Factor  | Level   | Level       |         |        |
| MHz        | dB      | dBuV    | dBuV/m      | dB      | dBuV/m |
| Horizontal |         |         |             |         |        |
| 346.220    | -2.213  | 39.046  | 36.833      | -9.167  | 46.000 |
| 460.680    | 1.589   | 33.739  | 35.328      | -10.672 | 46.000 |
| 633.340    | 1.880   | 34.997  | 36.877      | -9.123  | 46.000 |
| 691.540    | 3.681   | 30.276  | 33.957      | -12.043 | 46.000 |
| 749.740    | 3.320   | 31.842  | 35.162      | -10.838 | 46.000 |
| 922.400    | 6.334   | 32.548  | 38.882      | -7.118  | 46.000 |
|            |         |         |             |         |        |
| Vertical   |         |         |             |         |        |
| 346.220    | -3.093  | 36.562  | 33.469      | -12.531 | 46.000 |
| 518.880    | -0.546  | 34.402  | 33.856      | -12.144 | 46.000 |
| 633.340    | -3.920  | 42.233  | 38.313      | -7.687  | 46.000 |
| 691.540    | 2.421   | 35.588  | 38.009      | -7.991  | 46.000 |
| 807.940    | 3.586   | 37.273  | 40.858      | -5.142  | 46.000 |
| 922.400    | 5.534   | 33.943  | 39.477      | -6.523  | 46.000 |

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.



Test Item : General Radiated Emission Data

Test Site : No.3 OATS

Test Mode : Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW)(2437 MHz)

| Frequency  | Correct | Reading | Measurement | Margin  | Limit  |
|------------|---------|---------|-------------|---------|--------|
|            | Factor  | Level   | Level       |         |        |
| MHz        | dB      | dBuV    | dBuV/m      | dB      | dBuV/m |
| Horizontal |         |         |             |         |        |
| 346.220    | -2.213  | 38.252  | 36.039      | -9.961  | 46.000 |
| 460.680    | 1.589   | 34.618  | 36.207      | -9.793  | 46.000 |
| 633.340    | 1.880   | 34.598  | 36.478      | -9.522  | 46.000 |
| 691.540    | 3.681   | 29.679  | 33.360      | -12.640 | 46.000 |
| 749.740    | 3.320   | 32.601  | 35.921      | -10.079 | 46.000 |
| 922.400    | 6.334   | 33.724  | 40.058      | -5.942  | 46.000 |
|            |         |         |             |         |        |
| Vertical   |         |         |             |         |        |
| 171.620    | -8.752  | 38.625  | 29.873      | -13.627 | 43.500 |
| 346.220    | -3.093  | 36.345  | 33.252      | -12.748 | 46.000 |
| 518.880    | -0.546  | 34.730  | 34.184      | -11.816 | 46.000 |
| 691.540    | 2.421   | 36.138  | 38.559      | -7.441  | 46.000 |
| 807.940    | 3.586   | 36.784  | 40.369      | -5.631  | 46.000 |
| 922.400    | 5.534   | 35.195  | 40.729      | -5.271  | 46.000 |

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.



### 5. RF antenna conducted test

# 5.1. Test Equipment

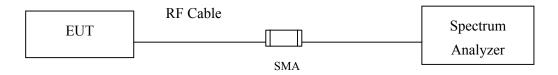
|   | Equipment         | Manufacturer | Model No./Serial No. | Last Cal.  |  |
|---|-------------------|--------------|----------------------|------------|--|
|   | Spectrum Analyzer | R&S          | FSP40 / 100170       | Jun, 2011  |  |
|   | Spectrum Analyzer | Agilent      | E4407B / US39440758  | Jun, 2011  |  |
| X | Spectrum Analyzer | Agilent      | N9010A / MY48030495  | Apr., 2011 |  |

Note: 1. All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.

2. The test instruments marked with "X" are used to measure the final test results.

# 5.2. Test Setup

### RF antenna Conducted Measurement:



### 5.3. Limits

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

### **5.4.** Test Procedure

The EUT was tested according to DTS test procedure of Jan. 2012 KDB558074 for compliance to FCC 47CFR 15.247 requirements.

Set RBW = 100 kHz, Set VBW> RBW, scan up through 10th harmonic.



# 5.5. Uncertainty

The measurement uncertainty

Conducted is defined as  $\pm$  1.27dB



# 5.6. Test Result of RF antenna conducted test

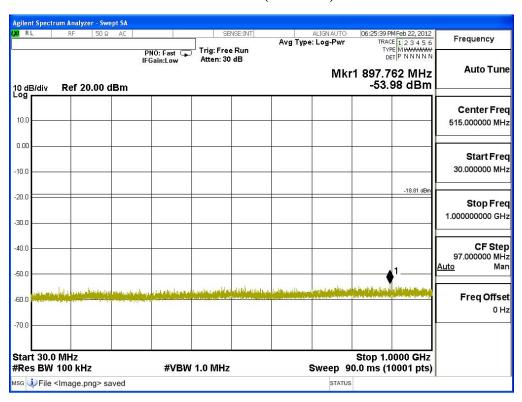
Product : Tablet PC

Test Item : RF antenna conducted test

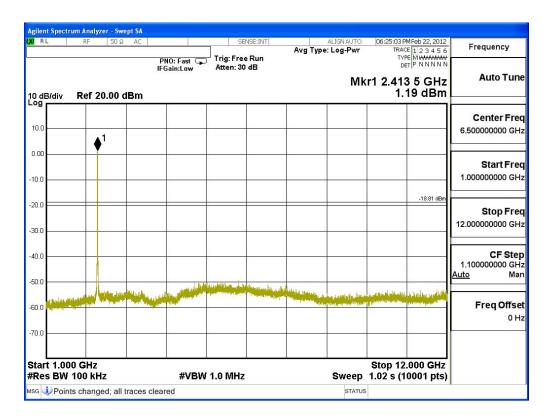
Test Site : No.3 OATS

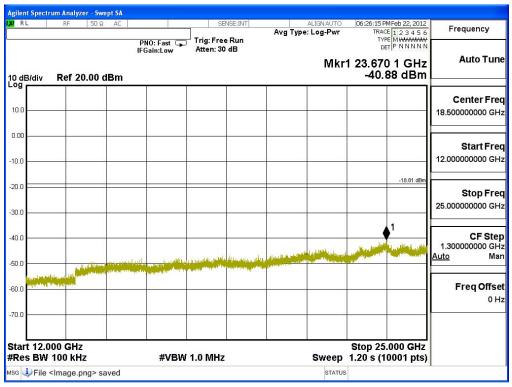
Test Mode : Mode 1: Transmit (802.11b 1Mbps)

# **Channel 01 (2412MHz)**



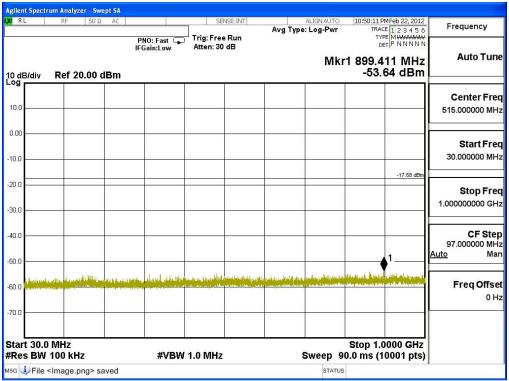


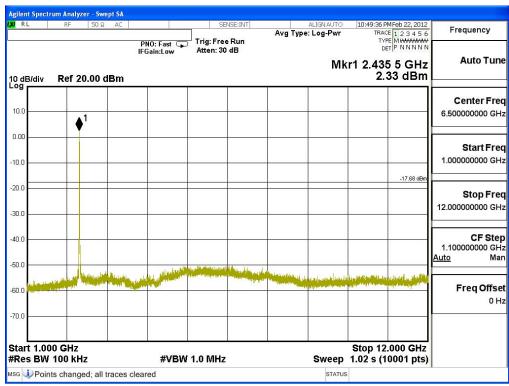




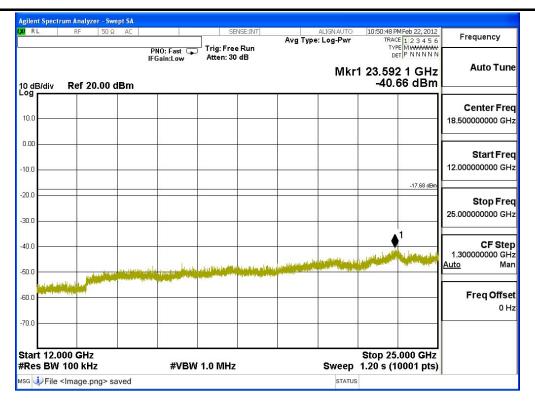


# **Channel 06 (2437MHz)**



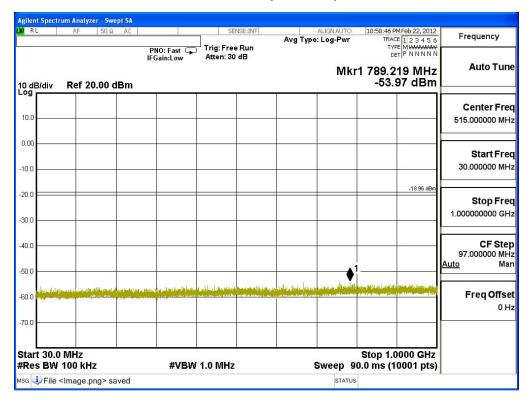


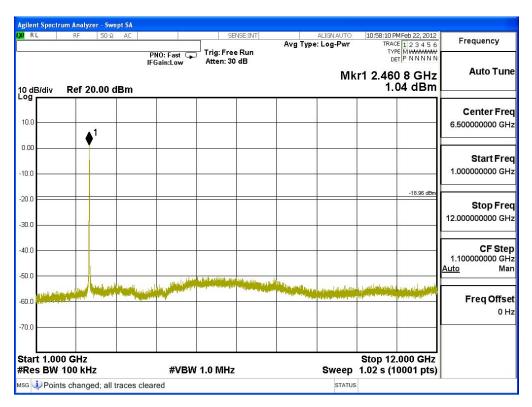




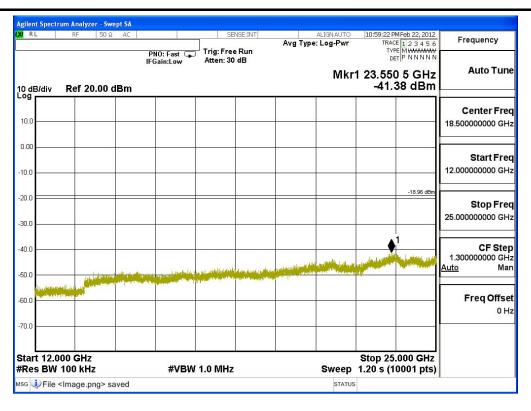


### **Channel 11 (2462MHz)**









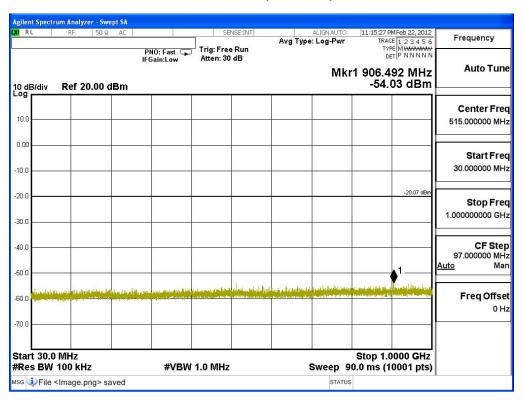


Test Item : RF Antenna Conducted Spurious

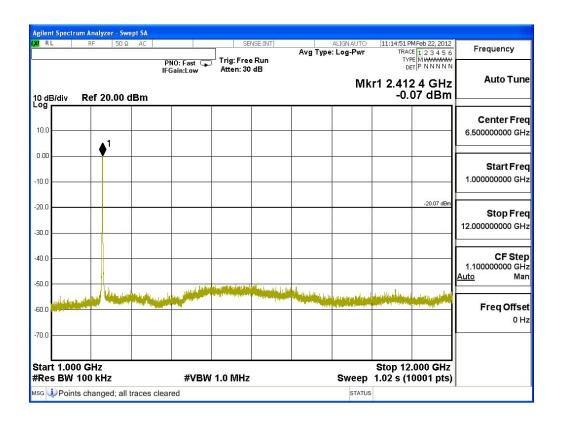
Test Site : No.3 OATS

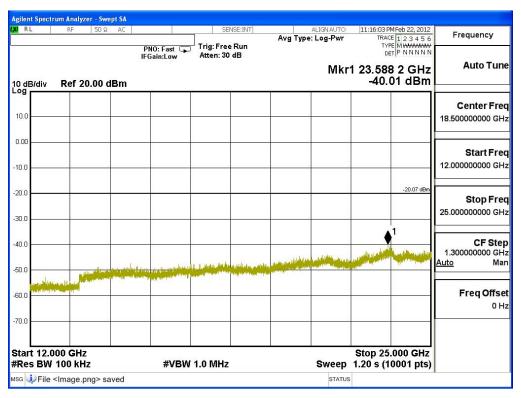
Test Mode : Mode 2: Transmit (802.11g 6Mbps)

# **Channel 01 (2412MHz)**



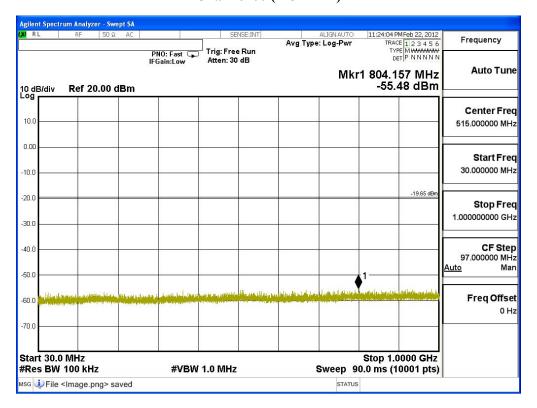


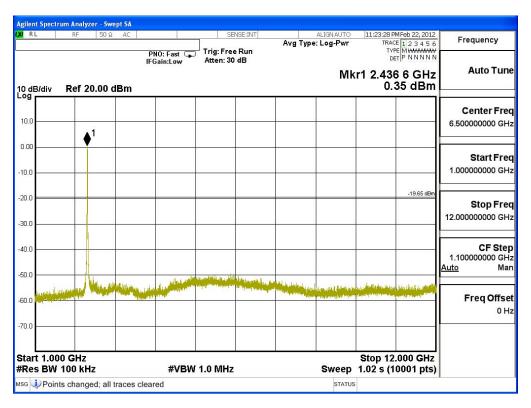




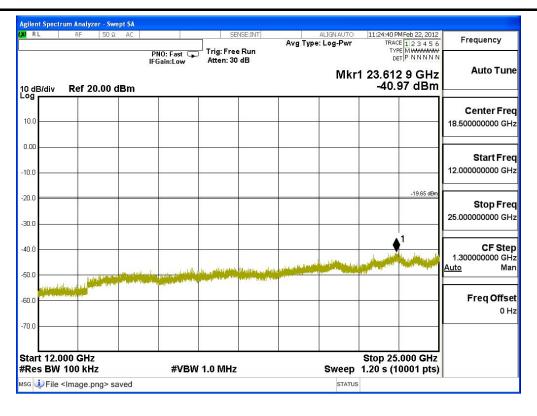


## **Channel 06 (2437MHz)**



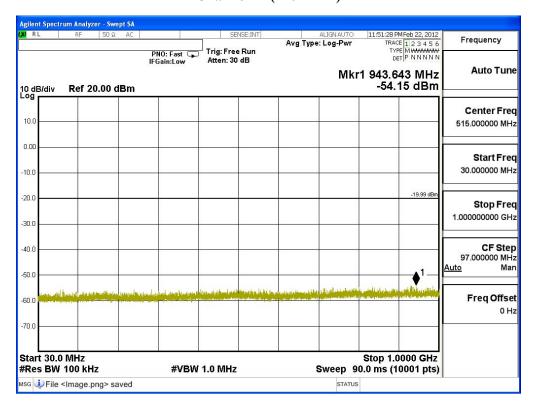


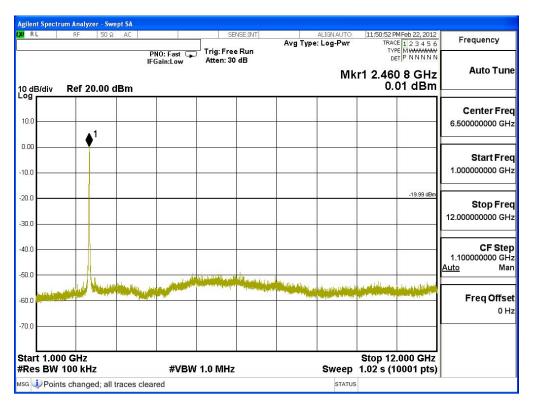




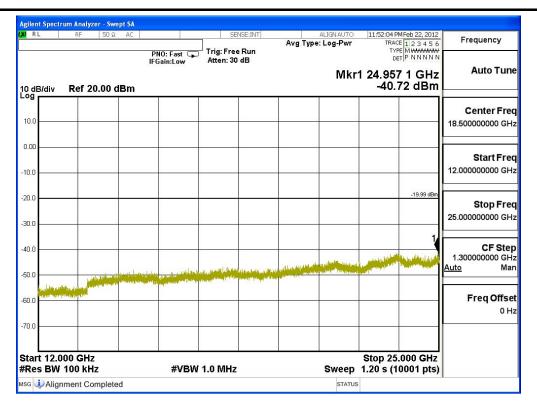


# **Channel 11 (2462MHz)**











Test Item : RF Antenna Conducted Spurious

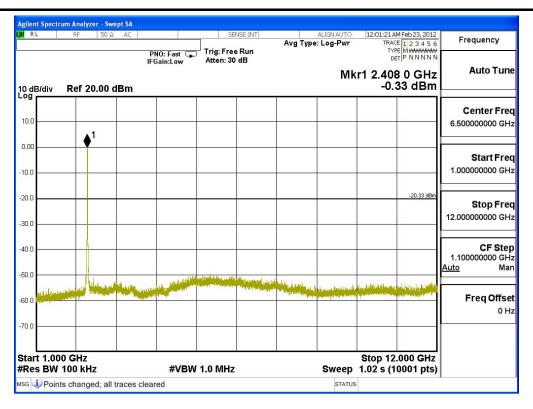
Test Site : No.3 OATS

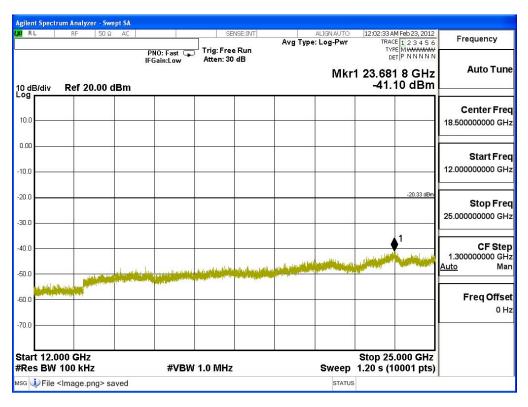
Test Mode : Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW)

# **Channel 01 (2412MHz)**



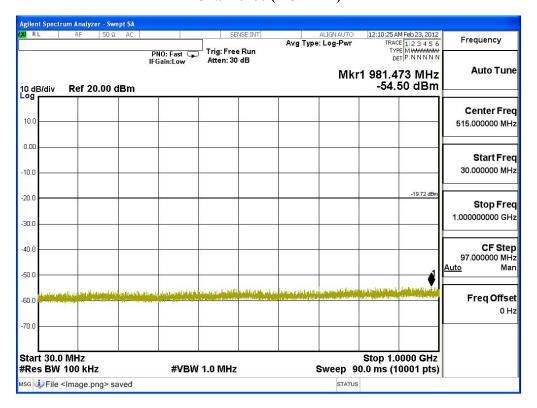


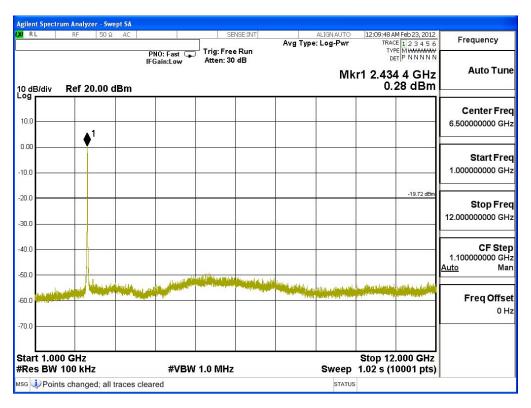






# **Channel 06 (2437MHz)**



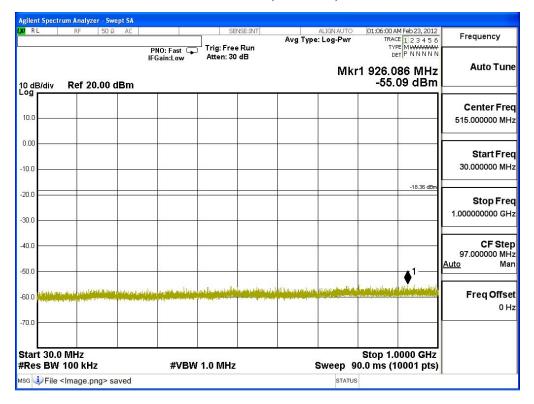


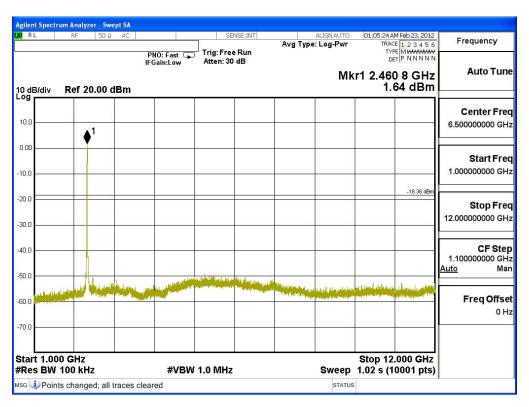




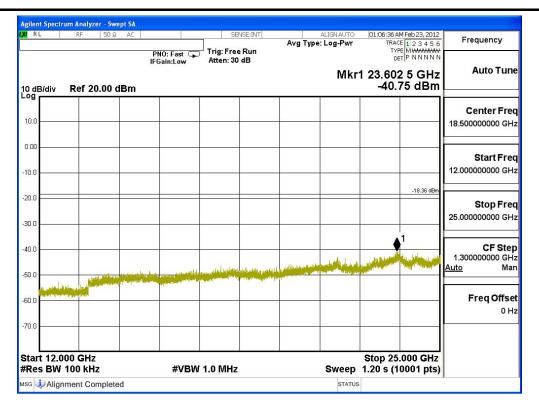


## **Channel 11 (2462MHz)**











# 6. Band Edge

# 6.1. Test Equipment

## **RF Conducted Measurement**

The following test equipments are used during the band edge tests:

|   | Equipment         | Manufacturer | Model No./Serial No. | Last Cal.  |
|---|-------------------|--------------|----------------------|------------|
|   | Spectrum Analyzer | R&S          | FSP40 / 100170       | Jun, 2011  |
|   | Spectrum Analyzer | Agilent      | E4407B / US39440758  | Jun, 2011  |
| X | Spectrum Analyzer | Agilent      | N9010A / MY48030495  | Apr., 2011 |

#### Note:

- 1. All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.
- 2. The test instruments marked with "X" are used to measure the final test results.

#### **RF Radiated Measurement:**

The following test equipments are used during the band edge tests:

| Test Site | Equipment |                   | Manufacturer    | Model No./Serial No.  | Last Cal.  |
|-----------|-----------|-------------------|-----------------|-----------------------|------------|
| ⊠Site # 3 |           | Bilog Antenna     | Schaffner Chase | CBL6112B/2673         | Sep., 2011 |
|           | X         | Horn Antenna      | Schwarzbeck     | BBHA9120D/D305        | Sep., 2011 |
|           |           | Horn Antenna      | Schwarzbeck     | BBHA9170/208          | Jul., 2011 |
|           | X         | Pre-Amplifier     | Agilent         | 8447D/2944A09549      | Sep., 2011 |
|           | X         | Spectrum Analyzer | Agilent         | E4407B / US39440758   | May, 2011  |
|           |           | Test Receiver     | R & S           | ESCS 30/ 825442/018   | Sep., 2011 |
|           | X         | Coaxial Cable     | QuieTek         | QTK-CABLE/ CAB5       | Feb., 2012 |
|           | X         | Controller        | QuieTek         | QTK-CONTROLLER/ CTRL3 | N/A        |
|           | X         | Coaxial Switch    | Anritsu         | MP59B/6200265729      | N/A        |

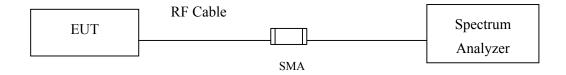
Note:

- 1. All instruments are calibrated every one year.
- 2. The test instruments marked by "X" are used to measure the final test results.

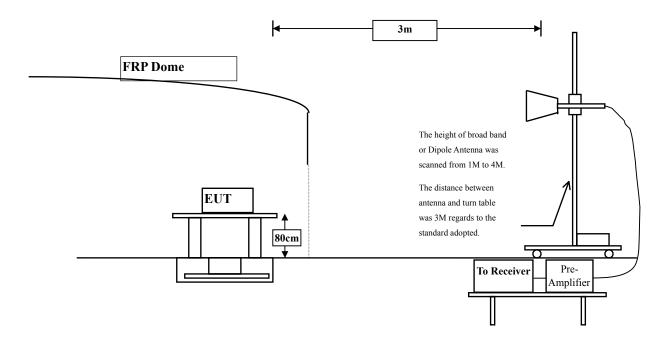


# 6.2. Test Setup

## **RF Conducted Measurement**



#### **RF Radiated Measurement:**



#### 6.3. Limits

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 20dB below the level of the fundamental or to the general radiated emission limits in paragraph 15.209, whichever is the lesser attenuation.



#### **6.4.** Test Procedure

The EUT was setup according to ANSI C63.4: 2003 and tested according to DTS test procedure of Jan. 2012 KDB558074 for compliance to FCC 47CFR 15.247 requirements.

The EUT is placed on a turn table which is 0.8 meter above ground. The turn table is rotated 360 degrees to determine the position of the maximum emission level. The EUT was positioned such that the distance from antenna to the EUT was 3 meters.

The antenna is scanned from 1 meter to 4 meters to find out the maximum emission level. This is repeated for both horizontal and vertical polarization of the antenna. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.4: 2003 on radiated measurement.

# 6.5. Uncertainty

- ± 3.9 dB above 1GHz
- ± 3.8 dB below 1GHz



# 6.6. Test Result of Band Edge

Product : Tablet PC

Test Item : Band Edge Data
Test Site : No.3 OATS

Test Mode : Mode 1: Transmit (802.11b 1Mbps)

# Fundamental Filed Strength

| Antenna<br>Pole | Frequency<br>[MHz] | Correction Factor [dB/m] | Reading Level [dBuV] | Emission Level [dBuV/m] | Detector |
|-----------------|--------------------|--------------------------|----------------------|-------------------------|----------|
| Horizontal      | 2412               | 31.639                   | 55.93                | 87.568                  | Peak     |
| Horizontal      | 2412               | 31.639                   | 51.26                | 82.898                  | Average  |
| Vertical        | 2412               | 30.95                    | 58.29                | 89.239                  | Peak     |
| Vertical        | 2412               | 31.639                   | 53.62                | 85.258                  | Average  |

Note: 1:Spectrum Analyzer setting:

Peak detector: RBW=1MHz, VBW=1MHz Average detector: RBW=1MHz, VBW=10Hz

## Band Edge Test Data

| Antenna<br>Pole | Test<br>Frequency<br>(MHz) | Fundamental<br>(dBuV/m) | Δ (dB) | Band Edge<br>Field Strength<br>(dBuV/m) | Limit (dBuV/m) | Detector |
|-----------------|----------------------------|-------------------------|--------|-----------------------------------------|----------------|----------|
| Horizontal      | 2384.9                     | 87.568                  | 47.45  | 40.118                                  | 74.000         | Peak     |
| Horizontal      | 2388.9                     | 82.898                  | 55.43  | 27.468                                  | 54.000         | Average  |
| Vertical        | 2384.9                     | 89.239                  | 47.45  | 41.789                                  | 74.000         | Peak     |
| Vertical        | 2388.9                     | 85.258                  | 55.43  | 29.828                                  | 54.000         | Average  |

#### Note:

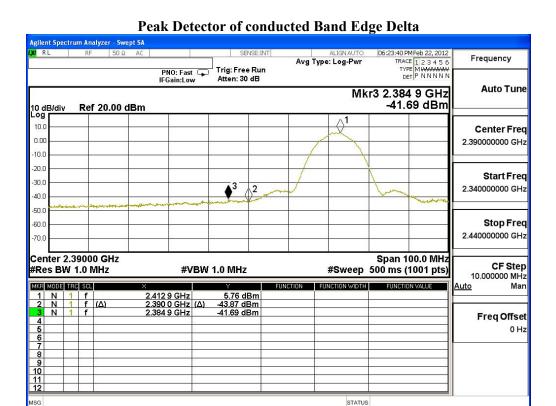
The Band Edge Field Strength was calculated using the Fundamental and Conducted Band Edge measurements per the Marker-Delta Method with the following formula:

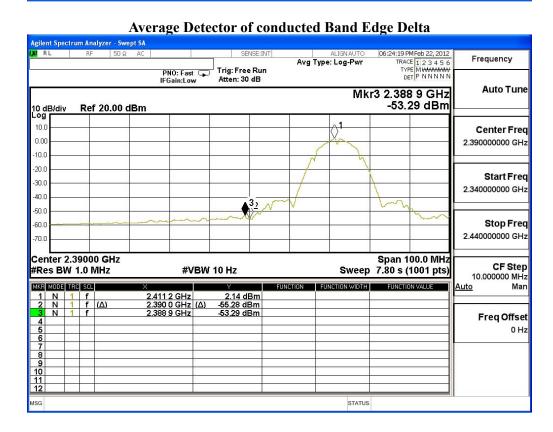
Band Edge field Strength =  $F - \Delta$ 

F = Fundamental field Strength (Peak or Average)

 $\Delta$  = Conducted Band Edge Delta (Peak or Average)









Test Item : Band Edge Data
Test Site : No.3 OATS

Test Mode : Mode 1: Transmit (802.11b 1Mbps)

# Fundamental Filed Strength

| Antenna<br>Pole | Frequency<br>[MHz] | Correction Factor [dB/m] | Reading Level<br>[dBuV] | Emission Level [dBuV/m] | Detector |
|-----------------|--------------------|--------------------------|-------------------------|-------------------------|----------|
| Horizontal      | 2462               | 32.019                   | 56.05                   | 88.069                  | Peak     |
| Horizontal      | 2462               | 32.019                   | 51.45                   | 83.469                  | Average  |
| Vertical        | 2462               | 31.29                    | 58.85                   | 90.14                   | Peak     |
| Vertical        | 2462               | 31.29                    | 54.34                   | 85.63                   | Average  |

Note: 1:Spectrum Analyzer setting:

Peak detector: RBW=1MHz, VBW=1MHz Average detector: RBW=1MHz, VBW=10Hz

# Band Edge Test Data

| Antenna<br>Pole | Test<br>Frequency<br>(MHz) | Fundamental<br>(dBuV/m) | Δ (dB) | Band Edge<br>Field Strength<br>(dBuV/m) | Limit (dBuV/m) | Detector |
|-----------------|----------------------------|-------------------------|--------|-----------------------------------------|----------------|----------|
| Horizontal      | 2491.5                     | 88.069                  | 47.1   | 40.969                                  | 74.000         | Peak     |
| Horizontal      | 2499.8                     | 83.469                  | 54.43  | 29.039                                  | 54.000         | Average  |
| Vertical        | 2491.5                     | 90.14                   | 47.1   | 43.04                                   | 74.000         | Peak     |
| Vertical        | 2499.8                     | 85.63                   | 54.43  | 31.2                                    | 54.000         | Average  |

#### Note:

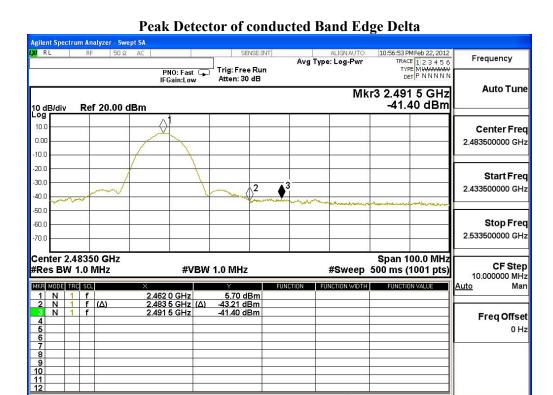
The Band Edge Field Strength was calculated using the Fundamental and Conducted Band Edge measurements per the Marker-Delta Method with the following formula:

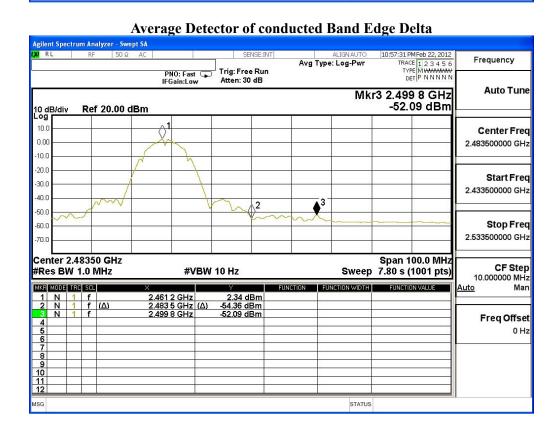
Band Edge field Strength =  $F - \Delta$ 

F = Fundamental field Strength (Peak or Average)

 $\Delta$  = Conducted Band Edge Delta (Peak or Average)









Test Item : Band Edge Data
Test Site : No.3 OATS

Test Mode : Mode 2: Transmit (802.11g 6Mbps)

## Fundamental Filed Strength

| Antenna    | Frequency | <b>Correction Factor</b> | Reading Level | <b>Emission Level</b> | Detector |
|------------|-----------|--------------------------|---------------|-----------------------|----------|
| Pole       | [MHz]     | [dB/m]                   | [dBuV]        | [dBuV/m]              |          |
| Horizontal | 2412      | 31.771                   | 65.26         | 97.032                | Peak     |
| Horizontal | 2412      | 31.771                   | 47.74         | 79.512                | Average  |
| Vertical   | 2412      | 30.248                   | 63.14         | 93.389                | Peak     |
| Vertical   | 2412      | 30.248                   | 46.02         | 76.269                | Average  |

Note: 1:Spectrum Analyzer setting:

Peak detector: RBW=1MHz, VBW=1MHz Average detector: RBW=1MHz, VBW=10Hz

## Band Edge Test Data

| Antenna<br>Pole | Test<br>Frequency<br>(MHz) | Fundamental<br>(dBuV/m) | Δ (dB) | Band Edge<br>Field Strength<br>(dBuV/m) | Limit (dBuV/m) | Detector |
|-----------------|----------------------------|-------------------------|--------|-----------------------------------------|----------------|----------|
| Horizontal      | 2389.4                     | 97.032                  | 37.67  | 59.362                                  | 74.000         | Peak     |
| Horizontal      | 2390                       | 79.512                  | 40.38  | 39.132                                  | 54.000         | Average  |
| Vertical        | 2389.4                     | 93.389                  | 37.67  | 55.719                                  | 74.000         | Peak     |
| Vertical        | 2390                       | 76.269                  | 40.38  | 35.889                                  | 54.000         | Average  |

## Note:

The Band Edge Field Strength was calculated using the Fundamental and Conducted Band Edge measurements per the Marker-Delta Method with the following formula:

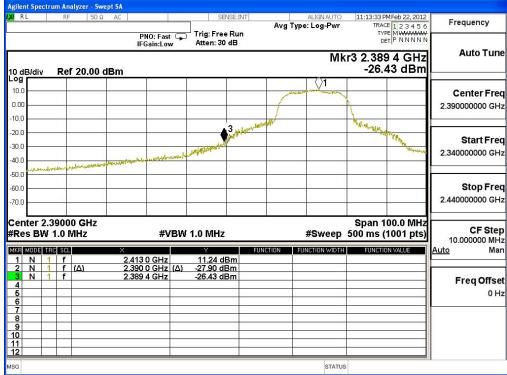
Band Edge field Strength =  $F - \Delta$ 

F = Fundamental field Strength (Peak or Average)

 $\Delta$  = Conducted Band Edge Delta (Peak or Average)







## Average Detector of conducted Band Edge Delta

